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**Year Book  
Australia**



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# Preface

Year Book Australia is the principal reference work produced by Australian Bureau of Statistics (ABS). It provides a comprehensive and detailed statistical overview of various aspects of the economy and social conditions in Australia, together with their administrative and legislative background. In addition, it contains descriptive matter dealing with Australia's government, international relations, defence, geography and climate.

This 1998 edition reproduces the Constitution of the Commonwealth of Australia. This is in keeping with past practice, whereby the Constitution has been included periodically in *Year Book Australia*. It was last included in the 1992 edition.

The first Official Year Book of the Commonwealth was published in 1908, although individual Australian States and colonies had been producing year books for several decades previously.

The statistics contained in this edition are the most recent available at the time of its preparation. More detailed and, in many cases, more recent statistics are available in the publications of the ABS and other organisations. The sources of information are shown throughout and at the end of chapters of the *Year Book*, while the *ABS Catalogue of Publications and Products* (1101.0) lists all current publications of the ABS.

ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued co-operation is very much appreciated. Particular thanks and appreciation are extended to those organisations which have kindly supplied material for inclusion in this 1998 edition of *Year Book Australia*.

Australian Bureau of Statistics  
Canberra  
February 1998

W. McLennan  
Australian Statistician





# Introduction

**Y**ear Book Australia provides a comprehensive overview of the economic and social conditions of contemporary Australia. It is a statistically oriented publication with sufficient background information to establish a context for the statistics and to assist in understanding and interpreting them.

Many of the statistics are derived from the Australian Bureau of Statistics (ABS), the official statistical agency which produces the *Year Book*. However, a great deal of the information is also contributed by other, predominantly government, organisations. The official nature of the contributors to the *Year Book* ensures a high degree of objectivity and reliability in the picture presented of contemporary Australia.

The *Year Book* also presents some historical and international perspectives of Australia.

This current (80th) edition is the latest in a long series of Year Books extending back to the first edition in 1908. This series provides a valuable source of information on the state of Australia at any particular point in this period.

*Year Book Australia 1998* is also available on CD-ROM.

## Finding information

The contents pages at the beginning of the *Year Book* and preceding each chapter provide a guide to the broad subjects contained in each chapter. The index assists in locating information on more specific subjects. A list of special articles which have appeared in previous editions is contained at the end of the *Year Book*.

The tables and graphs in a chapter are numbered and the text is cross-referenced, as necessary, to the table or graph to which it relates.

## Further information

While the statistics and descriptive information contained in the *Year Book* provide a comprehensive overview of Australia, they represent only a relatively small part of the statistics and other information available. The *Year Book* is aimed primarily at providing a ready and convenient source of reference, both to those familiar and unfamiliar with a particular subject. In other words, because of the range of

subjects, and limitations on the size of the *Year Book*, it aims at breadth rather than depth of information.

For those requiring information in greater depth, the *Year Book* also serves as a directory to more detailed sources, with the source shown for each statistical table, graph and map. Where the ABS is the source, the title and catalogue number of the relevant publication are quoted. For other sources, the name of the organisation is shown, and the publication title where appropriate. Relevant ABS and other publications are also listed at the end of each chapter. A useful complementary publication is the *ABS Catalogue of Publications and Products* (1101.0) which lists all current publications and products of the ABS.

The Year Books or Statistical Summaries produced by the ABS for each State or Territory provide information similar to that contained in the *Year Book Australia*, for the State or Territory concerned.

In many cases, the ABS can also provide information which is not published or which is compiled from a variety of published and unpublished sources. Information of this kind may be obtained through the Information Consultancy Service. Charges are generally made for such information. Inquiries may be made by contacting the Inquiries Section in the nearest ABS office (see page 788).

The annual reports of government departments and agencies also provide a valuable source of more detailed information on subjects covered in the *Year Book*.

For a variety of reasons, it is not possible for all statistics in the *Year Book* to relate to the latest or the same year. Readers wishing to obtain or clarify the latest available statistics should contact the relevant source.

## Comments from readers

The ABS endeavours to keep the balance of the contents of the *Year Book* in line with the ever-changing nature of the nation. For this reason comments on the adequacy and balance of the contents of the *Year Book* are welcomed and should be directed to the Editor of the Year Book at ABS National Office, Canberra.

**Symbols and abbreviations**

The following symbols, where shown in columns of figures of elsewhere in tables, mean:

- n.a. not available
- n.y.a not yet available
- nil or rounded to zero
- .. not applicable
- n.p. not available for separate publication (but included in totals where applicable)
- p preliminary — figures or series subject to revision
- r figures or series revised since previous issue
- n.e.i. not elsewhere included
- n.e.c. not elsewhere classified
- n.e.s. not elsewhere specified
- break in continuity of series (where drawn across a column between two consecutive figures)
- \* subject to high standard errors and should be used with caution

The following abbreviations are used for the titles of the Australian States and Territories and Australia:

- NSW New South Wales
- Vic. Victoria
- Qld Queensland
- WA Western Australia
- SA South Australia
- Tas. Tasmania
- NT Northern Territory
- ACT Australian Capital Territory
- Aust. Australia

Yearly periods shown, for example, as 1996, refer to the year ended 31 December 1996; those shown, for example, as 1996–97, refer to the year ended 30 June 1997. Other yearly periods are specifically indicated. The range of years shown in the table headings, for example, 1901 to 1996–97, indicates the period covered, but does not necessarily imply that each intervening year is included or that the yearly period has remained the same throughout the series.

Values are shown in Australian dollar (\$) or cents (c) unless another currency is specified.

Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

# 1

# Geography and climate

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## Introduction

Geography is the science of the earth's form, its physical features, climate and population, and how they relate to each other. The first part of this chapter describes Australia's land forms and topographic features and how they were formed. The second part describes the island continent's wide range of climatic conditions. The third part discusses water resources, a major factor in land form and climate which impacts on many aspects of life in Australia.

## Geography of Australia

### Position and area

Australia comprises a land area of about 7,682,300 km<sup>2</sup> (see table 1.1). The land lies

between latitudes 10°41' south (Cape York) and 43°39' south (South East Cape, Tasmania) and between longitudes 113°09' east (Steep Point, Western Australia) and 153°39' east (Cape Byron, New South Wales). The most southerly point on the mainland is South Point (Wilson's Promontory) 39°08' south. The latitudinal distance between Cape York and South Point is about 3,180 km, while the latitudinal distance between Cape York and South East Cape, Tasmania, is 3,680 km. The longitudinal distance between Steep Point and Cape Byron is about 4,000 km.

The area of Australia is almost as great as that of the United States of America (excluding Alaska), about 50% greater than Europe (excluding the former USSR) and 32 times greater than the United Kingdom. Tables 1.2 and 1.3 show the area of Australia in relation to areas of other continents and selected countries.

### 1.1 AREA, COASTLINE, TROPICAL AND TEMPERATE ZONES, AND STANDARD TIMES

| State/Territory              | Estimated area           |                 | Length of coastline<br>km | % of total area |                | Standard times    |                          |
|------------------------------|--------------------------|-----------------|---------------------------|-----------------|----------------|-------------------|--------------------------|
|                              | Total<br>km <sup>2</sup> | Total area<br>% |                           | Tropical zone   | Temperate zone | Meridian selected | Ahead of GMT(a)<br>hours |
| New South Wales              | 801 600                  | 10.43           | 1 900                     | ..              | 100            | 150°E             | 10.0                     |
| Victoria                     | 227 600                  | 2.96            | 1 800                     | ..              | 100            | 150°E             | 10.0                     |
| Queensland                   | 1 727 200                | 22.48           | 7 400                     | 54              | 46             | 150°E             | 10.0                     |
| South Australia              | 984 000                  | 12.81           | 3 700                     | ..              | 100            | 142°30' E         | 9.5                      |
| Western Australia            | 2 525 500                | 32.87           | 12 500                    | 37              | 63             | 120°E             | 8.0                      |
| Tasmania                     | 67 800                   | .88             | 3 200                     | ..              | 100            | 150°E             | 10.0                     |
| Northern Territory           | 1 346 200                | 17.52           | 6 200                     | 81              | 19             | 142°30' E         | 9.5                      |
| Australian Capital Territory | 2 400                    | .03             | (b)35                     | ..              | 100            | 150°E             | 10.0                     |
| <b>Australia</b>             | <b>7 682 300</b>         | <b>100.00</b>   | <b>36 735</b>             | <b>39</b>       | <b>61</b>      | <b>..</b>         | <b>..</b>                |

(a) Greenwich Mean Time. During daylight saving periods, an hour should be added to the times in this column. (b) Jervis Bay Territory.

Source: Bureau of Meteorology.

1.2 AREAS OF CONTINENTS

|                                                                  | Area                 |
|------------------------------------------------------------------|----------------------|
|                                                                  | '000 km <sup>2</sup> |
| Continents                                                       |                      |
| Asia                                                             | 44 614               |
| Africa                                                           | 30 319               |
| North, Central America and West Indies                           | 24 247               |
| South America                                                    | 17 834               |
| Europe                                                           | 10 600               |
| Australia and Oceania                                            | 8 504                |
| <b>Total land mass excluding Arctic and Antarctic continents</b> | <b>135 774</b>       |

Source: *Encyclopaedia Britannica and The World Book Encyclopedia*.

1.3 AREAS OF SELECTED COUNTRIES

|                                                                  | Area                 |
|------------------------------------------------------------------|----------------------|
|                                                                  | '000 km <sup>2</sup> |
| Countries (seven largest)                                        |                      |
| Russia                                                           | 17 073               |
| Canada                                                           | 9 976                |
| China                                                            | 9 590                |
| United States of America                                         | 9 363                |
| Brazil                                                           | 8 512                |
| Australia                                                        | 7 682                |
| India                                                            | 3 288                |
| Selected other countries                                         |                      |
| Belorus                                                          | 208                  |
| France                                                           | 544                  |
| Germany                                                          | 357                  |
| Indonesia                                                        | 1 919                |
| Japan                                                            | 372                  |
| Kazakhstan                                                       | 2 717                |
| Papua New Guinea                                                 | 462                  |
| New Zealand                                                      | 269                  |
| Ukraine                                                          | 604                  |
| United Kingdom                                                   | 244                  |
| <b>Total land mass excluding Arctic and Antarctic continents</b> | <b>135 774</b>       |

Source: *Encyclopaedia Britannica and The World Book Encyclopedia*.

Landforms and their history

Australia is the lowest, flattest and, apart from Antarctica, the driest of the continents. Unlike Europe and North America, where some landscapes date back to 'only' 20,000 years ago, when great ice sheets retreated, the age of landforms in Australia is generally measured in many millions of years. This fact gives Australia a very distinctive physical geography. Map 1.4 shows the major relief patterns of the Australian continent.

The continent can be divided into three parts:

- the Western Plateau;
- the Central Lowlands; and
- the Eastern Highlands.

The Western Plateau consists of very old rocks (some over 3,000 million years old), and much of it has existed as a landmass for over 500 million years. Several parts have individual plateau names (e.g. Kimberley, Hammersley, Arnhem Land, Yilgarn). In the Perth area, younger rocks along a coastal strip are separated from the rest by the Darling Fault escarpment. The Nullabor Plain is virtually an uplifted sea floor, a limestone plain of Miocene age (about 25 million years).

The Central Lowlands stretch from the Gulf of Carpentaria through the Great Artesian Basin to the Murray–Darling Plains. The Great Artesian Basin is filled with sedimentary rocks which hold water that enters in the wetter Eastern Highlands.

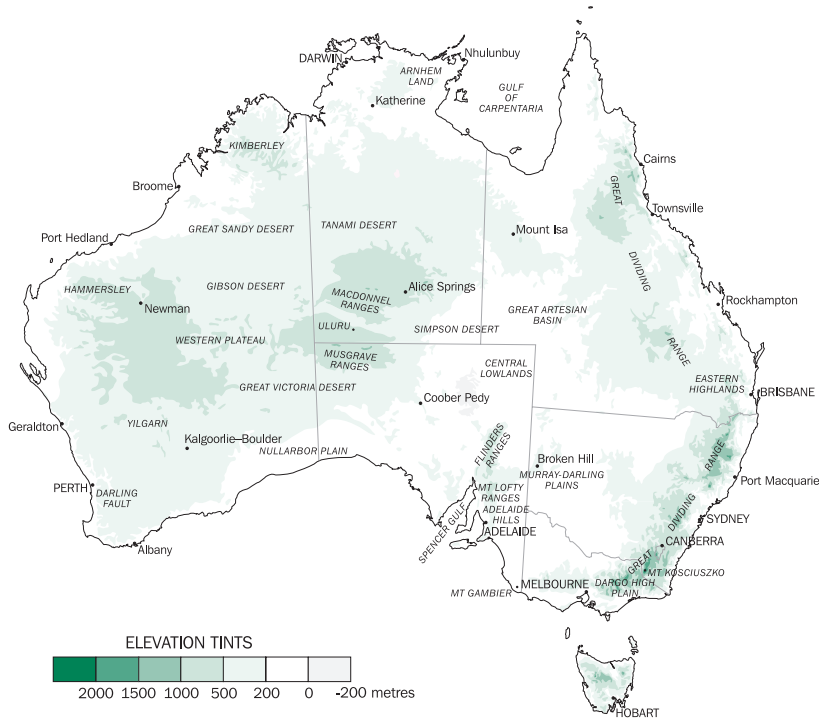
Much of the centre of Australia is flat, but there are numerous ranges (e.g. Macdonnells, Musgrave) and some individual mountains of which Uluru (Ayers Rock) is probably the best known. Faulting and folding in this area took place long ago. The area was worn to a plain, the plain uplifted and then eroded to form the modern ranges on today's plain. In looking at Uluru, one remarkable thing is not so much how it got there, but that so much has been eroded from all around, to leave it there.

In the South Australian part of the Central Lowlands, fault movements are more recent, and the area can be considered as a number of blocks that have been moved up and down to form a series of ranges (Mt Lofty, Flinders Ranges) and hills (such as the Adelaide Hills), with the down faulted blocks occupied by sea (e.g. Spencer Gulf) or lowlands including the lower Murray Plains.

The Eastern Highlands rise gently from central Australia towards a series of high plateaus, and even the highest part around Mt Kosciuszko (2,228 metres) is part of a plateau.

There are a few younger faults and folds, such as the Lake George Fault near Canberra, and the Lapstone Monocline near Sydney.

## 1.4 AUSTRALIA, Elevation



Source: AUSLIG 1996.

Some plateaus in the Eastern Highlands are dissected by erosion into rugged hills, and the eastern edges of plateaus tend to form high escarpments. Many of these are united to form a Great Escarpment that runs from northern Queensland to the Victorian border. Australia's highest waterfalls (Wollombi on the Macleay, Wallaman Falls on a tributary of the Herbert, Barron Falls near Cairns, and Wentworth Falls in the Blue Mountains) all occur where rivers flow over the Great Escarpment. For most of its length the Great Divide (separating rivers flowing to Central Australia from rivers flowing to the Pacific) runs across remarkably flat country dotted with lakes and airstrips. In eastern Victoria, however, the old plateau has been eroded into separate High Plains (such as Dargo High Plain).

The present topography results from a long landscape history which can be started in the Permian, about 290 million years ago, when much of Australia was glaciated by a huge ice cap. After the ice melted, parts of the continent

subsided and were covered with sediment to form sedimentary basins such as the Great Artesian Basin. By early Cretaceous times, about 140 million years ago, Australia was already so flat and low that a major rise in sea level divided it into three landmasses as the shallow Cretaceous sea spread over the land.

In the following Tertiary times, Australia can be regarded as a landscape of broad swells varied by a number of sedimentary basins (Murray, Gippsland, Eucla, Carpentaria, Lake Eyre and other basins). These slowly filled up and some are now sources of coal or oil. The Eastern Highlands were uplifted about this time.

Throughout the Tertiary, volcanoes erupted in eastern Australia. Some individual volcanoes were the size of modern Vesuvius, and huge lava plains covered large areas. Volcanic activity continued up to a few thousand years ago in Victoria and Queensland. Australia's youngest volcano is Mt Gambier in South Australia, about 6,000 years old.

Between 55 and 10 million years ago Australia drifted across the surface of the earth as a plate, moving north from a position once adjacent to Antarctica. There have been many changes in the climate of Australia in the past, but oddly these do not seem to be due to changing latitude (associated with global scale plate movements). Even when Australia was close to the South Pole, the climate was relatively warm and wet, and this persisted for a long time despite changes in latitude. It was probably under this climate that the deep weathered, iron-rich profiles that characterise much of Australia were formed. Aridity only seems to have set in after Australia reached its present latitude, and the northern part was probably never arid.

Today a large part of Australia is arid or semi-arid. Sand dunes are mostly longitudinal and are aligned with dominant wind directions associated with the regular passage of high pressure cells (anticyclones). These 'highs' rotate anticlockwise and track at about 28°S in winter and 38°S in summer, resulting in predominantly south-east to easterly flows in the north and north-west to westerly flows in the south. Looking down from above, the south-east Trade Winds or 'Trades' would be those winds in the top right hand quarter of a hypothetical, stationary 'high' centred on the Australian continent.

The dunes are mostly fixed now. Stony deserts or gibber plains (covered with small stones or 'gibbers') are areas without a sand cover and occupy a larger area than the dunefields. Salt lakes occur in many low positions, in places following lines of ancient drainage. They are often associated with lunettes, dunes formed on the downwind side of lakes. Many important finds of Aboriginal prehistory have been made in lunettes. Despite the prevalence of arid conditions today, real aridity seems to be geologically young, with no dunes or salt lakes older than a million years.

The past few million years were notable for the Quaternary ice age. There were many glacial and interglacial periods (over 20) during this time, the last glacial period occurring about 20,000 years ago. In Tasmania, there is evidence of three different glaciations: the last glaciation, one sometime in the Quaternary, and one in the Tertiary. On the mainland, there is evidence of only the last glaciation, and the ice then covered only 25 km<sup>2</sup>, in the vicinity of Mt Kosciuszko.

The broad shape of Australia has been influenced over long periods by earth movements associated with large tectonic processes. However, much of the detail has been carved by river erosion. A significant number of Australia's rivers, like the Diamantina River, drain inland. While they may be eroding their valleys near their highland sources, their lower courses are filling up with alluvium, and the rivers often end in salt lakes which are dry for most of the time. Other rivers reach the sea, and have dissected a broad near-coast region into plateaus, hills and valleys. Many of the features of the drainage pattern of Australia have a very long history, and some individual valleys have maintained their position for hundreds of millions of years. The salt lakes of the Yilgarn Plateau in Western Australia are the remnants of a drainage pattern that was active before continental drift separated Australia from Antarctica.

During the last ice age, sea level was more than 100 metres lower than it is today; the current outer reef area of the Great Barrier Reef would have been the coast at that time. The rivers tended to cut down to the lower level, especially towards the sea. When the sea level rose again, some of the lower valleys were drowned, making fine harbours — like Sydney Harbour — while others tended to fill with alluvium as the sea rose — making the typical lowland valleys around the Australian coast.

Coastal geomorphology is also largely the result of the accumulation of sediment in drowned coasts. In some areas, such as Ninety Mile Beach (Victoria) or the Coorong (South Australia), there are beaches made simply from this accumulation. In much of the east there is a characteristic alternation of rocky headland and long beach, backed by plains filled with river and marine sediments.

The offshore shape of Australia, revealed in isobath contours, results mainly from the pattern of break-up of the super-continent of which Australia was once a part. In some areas, such as the Great Australian Bight, there is a broad continental shelf bounded by a steeper continental slope. In other areas, like south-east New South Wales around Merimbula and much of the Tasmanian coastline, the continental shelf is very narrow, sometimes coming to within 20 nautical miles of the coast. The Queensland coast is bounded by a broad plateau on which the Great Barrier Reef has grown in only the last two million years. In South Australia the continental shelf is grooved by submarine canyons.



The Australian landforms of today are thus seen to result from long-continued processes in a unique setting, giving rise to typical Australian landscapes, which in turn provide the physical basis for the distribution and nature of biological and human activity in Australia.

## Rivers and lakes

As can be inferred from the elevation and relief map (map 1.4), the rivers of Australia may be divided into two major classes; those of the coastal margins with moderate rates of fall and those of the central plains with very slight fall. Of the rivers of the east coast, the longest in Queensland are the Burdekin and the Fitzroy, while the Hunter is the longest coastal river of New South Wales. The longest river system in Australia is the Murray–Darling which drains part of Queensland, the major part of New South Wales and a large part of Victoria, finally flowing into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The length of the Murray is about 2,520 km, and the Darling and Upper Darling together are also just over 2,000 km long. The rivers of the north-west coast of Australia, for example the Murchison, Gascoyne, Ashburton, Fortescue, De Grey, Fitzroy, Drysdale and Ord, are of considerable length. So also are those rivers in the Northern Territory, for example the Victoria and Daly, and those on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert and Mitchell. The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the land.

There are many types of lake in Australia, the largest being drainage sumps from the internal rivers. In dry seasons these lakes finally become beds of salt and dry mud. The largest are Lake Eyre 9,500 km<sup>2</sup>, Lake Torrens 5,900 km<sup>2</sup> and Lake Gairdner 4,300 km<sup>2</sup>.

Other lake types are glacial, most common in Tasmania; volcanic crater lakes, predominantly in Victoria and Queensland; fault angle lakes, of which Lake George near Canberra is a good example; and coastal lakes formed by marine damming of valleys.

## Climate of Australia

The island continent of Australia features a wide range of climatic zones, from the tropical regions of the north, through the arid expanses of the interior, to the temperate regions of the south.

Widely known as ‘The Dry Continent’, the land mass is relatively arid, with 80% having a median rainfall less than 600 mm per year and 50% less than 300 mm (the average is 450 mm). Seasonal fluctuations can be large, with temperatures ranging from above 50°C to well below zero. However, extreme minimum temperatures are not as low as those recorded in other continents, probably because of the absence of extensive mountain masses to induce orographic cooling (which is in the order of  $-0.6^{\circ}\text{C}/100\text{ m}$  increase in elevation) and because of the large expanse of relatively warm surrounding oceans.

Although the climate can be described as predominantly continental, the insular nature of the land mass produces modifications to the general continental pattern.

Australia experiences many of nature’s more extreme phenomena, particularly droughts, floods, tropical cyclones, severe storms and bushfires.

## Climatic controls

The generally low relief of Australia is evident in the elevation and relief map (map 1.4). Compared to other continents, Australia causes little obstruction to the atmospheric systems which control the climate. A notable exception is the eastern uplands which modify the atmospheric flow, sometimes causing the ‘Easterly Dip’ which is evident in some surface pressure charts.

In the winter half of the year (May–October) anticyclones, or high pressure systems, pass from west to east across the continent and may remain almost stationary over the interior for several days. These anticyclones may be 4,000 km wide and, in the Southern hemisphere, rotate anticlockwise. Northern Australia is thus influenced by mild, dry south-east winds (the Trade Winds or ‘Trades’), and southern Australia experiences cool, moist westerly winds. The westerlies and the frontal systems associated with extensive depressions (lows, sometimes called extra-tropical cyclones) travelling over the Southern Ocean have a controlling influence on the climate of southern Australia during the winter season, causing rainy periods. Periodic north-west cloud bands in the upper levels of the atmosphere over the continent may interact with southern systems to produce rainfall episodes, particularly over eastern areas. Cold outbreaks, particularly in south-east Australia, occur when cold air of Southern Ocean origin is directed northwards by intense depressions

having diameters up to 2,000 km. Cold fronts associated with the southern depressions, or with secondary depressions over the Tasman Sea, may produce strong winds and large day-to-day variations in temperature in southern areas, particularly in south-east coastal regions.

In the summer half of the year (November–April) the anticyclones travel from west to east on a more southerly track across the southern fringes of Australia, directing easterly winds generally over the continent. Fine, warmer weather predominates in southern Australia with the passage of each anticyclone. Heat waves occur when there is an interruption to the eastward progression of the anticyclone ('blocking') and winds back northerly and later north-westerly. Northern Australia comes under the influence of summer disturbances associated with the southward intrusion of warm moist monsoonal air from north of the intertropical convergence zone, resulting in a hot rainy season. Southward dips of the monsoonal low pressure trough sometimes spawn tropical depressions, and may prolong rainy conditions over northern Australia for up to three weeks at a time.

Tropical cyclones are strong, well-organised low pressure systems of tropical origin where average surface winds are expected to reach at least gale force (speed equivalent of 34–47 knots) — gusts are usually 50% higher than the average. Severe tropical cyclone winds reach at least hurricane force (64 knots) — the highest wind speed recorded in Australia was 267 km/h, which occurred with Cyclone Olivia (April 1996). Tropical cyclones develop over the seas where temperatures exceed 27°C around northern Australia in summer, between November and April. Interestingly, tropical cyclones do not usually form within 5° (or so) north or south of the Equator because the Coriolis Force associated with the rotation of the Earth is close to zero in this zone and this 'twist' is important for cyclone formation. Their frequency of occurrence and the tracks they follow vary greatly from season to season. On average, about three cyclones per season directly affect the Queensland coast, and about three affect the north and north-west coasts. Tropical cyclones approaching the coast usually produce very heavy rain and high winds in coastal areas. Some cyclones move inland, losing intensity but still producing widespread heavy rainfall and, occasionally, moderate to severe damage.

The climate of eastern and northern Australia is influenced by the Southern Oscillation (SO), a see-sawing of atmospheric pressure between the northern Australian/Indonesian region and the central Pacific Ocean. This Oscillation is one of the most important causes of climatic variation after the annual seasonal cycle over eastern and northern Australia. The strength of the SO is defined by the Southern Oscillation Index, which is a measure of the difference in sea level atmospheric pressure between Tahiti in the central Pacific and Darwin in northern Australia. At one extreme of the Oscillation, the pressure is abnormally high at Darwin and abnormally low at Tahiti. Severe and widespread drought over eastern and northern Australia generally accompanies this extreme. These conditions generally commence early in the year, last for about 12 months, and have a recurrence period of two to seven years.

The above extreme is generally immediately preceded or followed by the opposite extreme where pressures at Darwin are abnormally low and those at Tahiti are abnormally high. In this case, rainfall is generally above average over eastern and northern Australia.

The SO is linked to sea surface temperatures (SSTs) in the Pacific Ocean. Dry extreme SO years are accompanied by above normal SSTs in the central and/or eastern equatorial Pacific and vice versa. Dry extreme years are called El Niño years (El Niño is 'baby boy' in Spanish). Wet extreme years are called La Niña years (La Niña is 'baby girl'). Continuing research into the El Niño/La Niña phenomenon is revealing the connectivity between atmospheric circulation, sea surface temperatures, currents (surface as well as deep currents) and their interaction with the land masses. The article at the end of this chapter provides further detail.

## Rainfall and other precipitation

### Annual

The area of lowest rainfall is in the vicinity of Lake Eyre in South Australia, where the median annual rainfall is only about 100 mm. Another very low rainfall area is in Western Australia in the region of the Giles–Warburton Range, which has a median annual rainfall of about 150 mm. A vast region, extending from the west coast near Shark Bay across the interior of Western Australia and South Australia to south-west Queensland and north-west New South Wales, has a median annual rainfall of less than 200 mm. This region is not normally exposed to moist air

masses for extended periods and rainfall is irregular, averaging only one or two days per month. However, in favourable synoptic situations, which occur infrequently over extensive parts of the region, up to 400 mm of rain may fall within a few days and cause widespread flooding.

The region with the highest median annual rainfall is the east coast of Queensland between Cairns and Cardwell, where Tully has a median of 4,048 mm (63 years to 1987 inclusive). The mountainous region of western Tasmania also has a high annual rainfall, with Lake Margaret having a median of 3,565 mm (76 years to 1987 inclusive). In the mountainous areas of north-east Victoria and some parts of the east coastal slopes there are small pockets with median annual rainfall greater than 2,500 mm.

The Snowy Mountains area in New South Wales also has a particularly high rainfall. The highest median annual rainfall for this region is 3,200 mm, and it is likely that small areas have a median annual rainfall approaching 4,000 mm on the western slopes above 2,000 metres elevation. Table 1.5 shows median annual rainfall by State and for Australia.

### Seasonal

As outlined earlier, the rainfall pattern of Australia is strongly seasonal in character with a winter rainfall regime in the south and a summer regime in the north.

The dominance of rainfall over other climatic

elements in determining the growth of specific plants in Australia has led to the development of a climatic classification based on two main parameters, median annual rainfall and the incidence of seasonal rainfall.

Evaporation and the concept of rainfall effectiveness are taken into account to some extent in this classification by assigning higher median annual rainfall limits to the summer zones than to the corresponding uniform and winter zones. The main features of the seasonal rainfall are:

- marked wet summer (the 'Monsoon') and dry winter of northern Australia;
- wet summer and relatively dry winter of south-eastern Queensland and north-eastern New South Wales;
- uniform rainfall in south-eastern Australia — much of New South Wales, parts of eastern Victoria and southern Tasmania;
- marked wet winter and dry summer of south-west Western Australia and, to a lesser extent, much of the remainder of southern Australia directly influenced by westerly circulation (sometimes called a 'Mediterranean' climate); and
- arid area comprising about half the continent extending from the north-west coast of Western Australia across the interior and reaching the south coast at the head of the Great Australian Bight.

**1.5 AREA DISTRIBUTION OF MEDIAN ANNUAL RAINFALL**

|                             | NSW(a)       | Vic.         | Qld          | SA           | WA           | Tas.         | NT           | Aust.        |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Median annual rainfall (mm) | %            | %            | %            | %            | %            | %            | %            | %            |
| Under 200                   | 8.0          | ..           | 10.2         | 74.2         | 43.5         | ..           | 15.5         | 29.6         |
| 200–299                     | 20.3         | 6.3          | 13.0         | 13.5         | 29.6         | ..           | 35.6         | 22.9         |
| 300–399                     | 19.0         | 19.2         | 12.3         | 6.8          | 10.5         | ..           | 9.0          | 11.2         |
| 400–499                     | 12.4         | 11.8         | 13.5         | 3.2          | 4.3          | ..           | 6.6          | 7.6          |
| 500–599                     | 11.3         | 14.1         | 11.6         | 1.8          | 3.1          | 12.2         | 5.8          | 6.6          |
| 600–799                     | 15.1         | 24.5         | 20.5         | 0.5          | 4.6          | 18.2         | 11.6         | 10.7         |
| 800–1 200                   | 11.3         | 17.7         | 12.6         | ..           | 3.7          | 25.0         | 9.6          | 7.7          |
| Above 1 200                 | 2.6          | 6.4          | 6.3          | ..           | 0.7          | 44.6         | 6.3          | 3.7          |
| <b>Total</b>                | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

(a) Includes Australian Capital Territory.

Source: Bureau of Meteorology.

**Rainday frequency**

A rainday occurs when more than 0.2 mm of rain falls in 24 hours, usually from 9 a.m. to 9 a.m. the next day. The frequency of raindays exceeds 150 per year in Tasmania (with a maximum of over 200 in western Tasmania), southern Victoria, parts of the north Queensland coast and in the extreme south-west of Western Australia. Over most of the continent the frequency is less than 50 raindays per year. The area of low rainfall with high variability, extending from the north-west coast of Western Australia through the interior of the continent, has less than 25 raindays per year. In the high rainfall areas of northern Australia the number of raindays is about 80 per year, but heavier falls occur in this region than in southern regions.

**Rainfall intensity**

The values in table 1.6 represent intensities over only small areas around the recording points because turbulence and exposure characteristics of the measuring gauge may vary over a distance of a few metres. The highest 24 hour (9 a.m. to 9 a.m.) falls are listed in table 1.7. Most of the very high 24 hour falls (above 700 mm) have occurred in the coastal strip of Queensland, where a tropical cyclone moving close to mountainous terrain provides ideal conditions for spectacular falls.

The highest annual rainfalls are listed by State/Territory in table 1.8.

**1.6    HIGHEST RAINFALL INTENSITIES**

| Station          | Period of record | Years of complete records | Period in hours |     |     |     |     |
|------------------|------------------|---------------------------|-----------------|-----|-----|-----|-----|
|                  |                  |                           | 1               | 3   | 6   | 12  | 24  |
|                  |                  |                           | mm              | mm  | mm  | mm  | mm  |
| Adelaide         | 1897–1991        | 91                        | 69              | 133 | 141 | 141 | 141 |
| Alice Springs    | 1951–1994        | 44                        | 75              | 87  | 108 | 160 | 207 |
| Brisbane         | 1911–1991        | 81                        | 99              | 142 | 182 | 266 | 327 |
| Broome           | 1948–1991        | 44                        | 112             | 157 | 185 | 313 | 353 |
| Canberra         | 1938–1990        | 45                        | 40              | 57  | 67  | 76  | 120 |
| Camaron          | 1956–1991        | 36                        | 44              | 63  | 83  | 95  | 108 |
| Charleville      | 1953–1992        | 35                        | 42              | 66  | 75  | 111 | 142 |
| Darwin (airport) | 1953–1994        | 42                        | 89              | 160 | 214 | 260 | 291 |
| Esperance        | 1963–1991        | 27                        | 39              | 50  | 62  | 75  | 86  |
| Hobart           | 1911–1991        | 81                        | 28              | 56  | 87  | 117 | 168 |
| Meekatharra      | 1953–1991        | 39                        | 60              | 67  | 81  | 99  | 112 |
| Melbourne        | 1873–1994        | 108                       | 76              | 83  | 86  | 97  | 130 |
| Mildura          | 1953–1993        | 41                        | 49              | 60  | 65  | 66  | 91  |
| Perth            | 1946–1991        | 45                        | 31              | 43  | 52  | 77  | 97  |
| Sydney           | 1913–1991        | 75                        | 121             | 194 | 200 | 244 | 340 |
| Townsville       | 1953–1992        | 39                        | 94              | 168 | 235 | 296 | 319 |

Source: Pluviograph records in Bureau of Meteorology archives.

**1.7 HIGHEST DAILY RAINFALLS(a)**

|                           | Date      | Amount |
|---------------------------|-----------|--------|
| State/Territory           |           | mm     |
| New South Wales           |           |        |
| Dorrigo (Myrtle Street)   | 21.2.1954 | 809    |
| Lowanna (Yalamurra)       | 22.4.1974 | 662    |
| Victoria                  |           |        |
| Tanybryn                  | 22.3.1983 | 375    |
| Nowa Nowa (Wairawa)       | 11.3.1906 | 275    |
| Queensland(a)             |           |        |
| Beerwah (Crohamhurst)     | 3.2.1893  | 907    |
| Finch Hatton PO           | 18.2.1958 | 878    |
| South Australia           |           |        |
| Motpena                   | 14.3.1989 | 273    |
| Nilpena                   | 14.3.1989 | 247    |
| Western Australia         |           |        |
| Roebourne (Whim Creek)    | 3.4.1898  | 747    |
| Broome (Kilto)            | 4.12.1970 | 635    |
| Tasmania                  |           |        |
| Cullenswood               | 22.3.1974 | 352    |
| Mathinna                  | 5.4.1929  | 337    |
| Northern Territory        |           |        |
| Roper Valley Station      | 15.4.1963 | 545    |
| Angurugu (Groote Eylandt) | 28.3.1953 | 513    |

(a) Bellenden Ker (Top Station) has recorded a 24 hour total of 960 mm from 3 p.m. to 3 p.m. on 3 and 4 January 1979. The standard daily rainfall period is 9 a.m. to 9 a.m.

Source: Bureau of Meteorology.

**1.8 HIGHEST ANNUAL RAINFALLS**

|                 | Station                     | Year | Amount |
|-----------------|-----------------------------|------|--------|
| State/Territory |                             |      | mm     |
| NSW             | Tallowood Point             | 1950 | 4 540  |
| Vic.            | Falls Creek SEC             | 1956 | 3 739  |
| Qld             | Bellenden Ker (Top Station) | 1979 | 11 251 |
| SA              | Aldgate State School        | 1917 | 1 853  |
| WA              | Armadale (Jarrahdale PO)    | 1917 | 2 169  |
| Tas.            | Lake Margaret               | 1948 | 4 504  |
| NT              | Elizabeth Downs             | 1973 | 2 966  |

Source: Bureau of Meteorology.

**Thunderstorms and hail**

A thunderday at a given location is a calendar day on which thunder is heard at least once. The average annual number of thunderdays varies from 74 per year near Darwin to less than 10 per year over parts of the southern regions. Convictional processes during the summer wet season cause high thunderstorm incidence in northern Australia. The generally high incidence of thunderdays (40–60 annually) over the eastern upland areas is caused mainly by orographic uplift of moist air streams.

Hail, mostly of small size (less than 10 mm diameter), occurs with winter-spring cold frontal activity in southern Australia. Summer thunderstorms, particularly over the uplands of eastern Australia, sometimes produce large hail (greater than 10 mm diameter). Large hail capable of piercing light-gauge galvanised iron occurs at irregular intervals and sometimes causes widespread damage.

**Snow**

Generally, snow covers much of the Australian Alps above 1,500 metres for varying periods from late autumn to early spring. Similarly, in Tasmania the mountains are covered fairly frequently above 1,000 metres in these seasons. The area, depth and duration are highly variable. In some years, snow falls in the altitude range of 500–1,000 metres. Snowfalls at levels below 500 metres are occasionally experienced in southern Australia, particularly in the foothill areas of Tasmania and Victoria, but falls are usually light and short lived. In some seasons, parts of the eastern uplands above 1,000 metres from Victoria to south-eastern Queensland have been covered with snow for several weeks. In ravines around Mount Kosciuszko (2,228 metres) small areas of snow may persist through summer, but there are no permanent snowfields.

**Temperature****Average temperatures**

Average annual air temperatures range from 28°C along the Kimberley coast in the extreme north of Western Australia to 4°C in the alpine areas of south-eastern Australia. Although annual temperatures may be used for broad comparisons, monthly temperatures are required for detailed analyses.

July is the month with the lowest average temperature in all parts of the continent. The months with the highest average temperature are January or February in the south and December in the north (except in the extreme north and north-west where it is November). The slightly lower temperatures of mid-summer in the north are due to the increase in cloud during the wet season.

**Average monthly maxima**

In January, average maximum temperatures exceed 35°C over a vast area of the interior and exceed 40°C over appreciable areas of the north-west. The consistently hottest part of

Australia in terms of summer maxima is around Marble Bar in Western Australia (150 km south-east of Port Hedland) where the average is 41°C and daily maxima during summer may exceed 40°C consecutively for several weeks at a time.

In July, a more regular latitudinal distribution of average maxima is evident. Maxima range from 30°C near the north coast to 5°C in the alpine areas of the south-east.

**Average monthly minima**

In January, average minima range from 27°C on the north-west coast to 5°C in the alpine areas of the south-east. In July, average minima fall below 5°C in areas south of the tropics (away from the coasts). Alpine areas record the lowest temperatures; the July average low is -5°C.

**Extreme maxima**

Temperatures have exceeded 45°C at nearly all inland stations more than 150 km from the coast and at many places on the north-west and south coasts. Temperatures have exceeded 50°C at some inland stations and at a few near the coast. It is noteworthy that Eucla on the south coast has recorded 50.7°C, the highest temperature in Western Australia. This is due to the long trajectory over land of hot north-west winds from the Marble Bar area. Although the highest temperature recorded in Australia was 53.1°C at Cloncurry (Queensland), more stations have exceeded 50°C in western New South Wales than in other areas due to the long land trajectory of hot winds from the north-west interior of the continent.

Extreme maximum temperatures recorded at selected stations, including the highest recorded in each State/Territory, are shown in table 1.9.

| 1.9 EXTREME MAXIMUM TEMPERATURES |      |            |
|----------------------------------|------|------------|
| Station                          | °C   | Date       |
| New South Wales                  |      |            |
| Bourke                           | 52.8 | 17.1.1877  |
| Wilcannia                        | 50.0 | 11.1.1939  |
| Menindee                         | 49.7 | 10.1.1939  |
| Victoria                         |      |            |
| Mildura                          | 50.8 | 6.1.1906   |
| Swan Hill                        | 49.4 | 18.1.1906  |
| Queensland                       |      |            |
| Cloncurry                        | 53.1 | 16.1.1889  |
| Winton                           | 50.7 | 14.12.1888 |
| Birdsville                       | 49.5 | 24.12.1972 |
| South Australia                  |      |            |
| Oodnadatta                       | 50.7 | 2.1.1960   |
| Marree                           | 49.4 | 2.1.1960   |
| Whyalla                          | 49.4 | 2.1.1960   |
| Western Australia                |      |            |
| Eucla                            | 50.7 | 22.1.1906  |
| Mundrabilla                      | 49.8 | 3.1.1979   |
| Forrest                          | 49.8 | 13.1.1979  |
| Madura                           | 49.4 | 7.1.1971   |
| Tasmania                         |      |            |
| Bushy Park                       | 40.8 | 26.12.1945 |
| Hobart                           | 40.8 | 4.1.1976   |
| Northern Territory               |      |            |
| Finke                            | 48.3 | 2.1.1960   |
| Jervois                          | 47.5 | 3.1.1978   |
| Australian Capital Territory     |      |            |
| Canberra (Acton)                 | 42.8 | 11.1.1939  |

Source: Bureau of Meteorology.

**Extreme minima**

The lowest temperatures in Australia have been recorded in the Snowy Mountains, where Charlotte Pass (elevation 1,760 metres) recorded -23.0°C on 28 June 1994 (see table 1.10). Temperatures have fallen below -5°C at most inland places south of the tropics and at some places within a few kilometres of southern coasts. At Eyre, on the south coast of Western Australia, a minimum temperature of -4.3°C has been recorded, and at Swansea, on the east coast of Tasmania, the temperature has fallen as low as -5.0°C.

In the tropics, extreme minima below 0°C have been recorded at many places away from the coasts — as far north as Herberton, Queensland (-5.0°C). Even very close to the tropical coastline, temperatures have fallen to 0°C, a low recording being -0.8°C for Mackay.



**1.10 EXTREME MINIMUM TEMPERATURES**

| Station                      | °C    | Date      |
|------------------------------|-------|-----------|
| New South Wales              |       |           |
| Charlotte Pass               | -23.0 | 18.6.1994 |
| Kiandra                      | -20.6 | 2.8.1929  |
| Perisher Valley              | -19.5 | 23.7.1979 |
| Victoria                     |       |           |
| Mount Hotham                 | -12.8 | 30.7.1931 |
| Omeo                         | -11.7 | 15.6.1965 |
| Hotham Heights               | -11.1 | 15.8.1968 |
| Queensland                   |       |           |
| Stanthorpe                   | -11.0 | 4.7.1895  |
| Warwick                      | -10.6 | 12.7.1965 |
| Mitchell                     | -9.4  | 15.8.1979 |
| South Australia              |       |           |
| Yongala                      | -8.2  | 20.7.1976 |
| Yunta                        | -7.7  | 16.7.1976 |
| Ernabella                    | -7.6  | 19.7.1983 |
| Western Australia            |       |           |
| Booylgoo Springs             | -6.7  | 12.7.1969 |
| Wandering                    | -5.7  | 1.6.1964  |
| Tasmania                     |       |           |
| Shannon                      | -13.0 | 30.6.1983 |
| Butlers Gorge                | -13.0 | 30.6.1983 |
| Tarraleah                    | -13.0 | 30.6.1983 |
| Northern Territory           |       |           |
| Alice Springs                | -7.5  | 12.7.1976 |
| Tempe Downs                  | -6.9  | 24.7.1971 |
| Australian Capital Territory |       |           |
| Gudgenby                     | -14.6 | 11.7.1971 |

Source: Bureau of Meteorology.

**Heat waves**

Periods with a number of successive days having a temperature higher than 40°C are relatively common in summer over parts of Australia. With the exception of the north-west coast of Western Australia, however, most coastal areas rarely experience more than three successive days of such conditions. The frequency increases inland, and periods of up to 10 successive days have been recorded at many inland stations. This figure increases to more than 20 days in parts of western Queensland and north-west Western Australia. The central part of the Northern Territory and the Marble Bar–Nullagine area of Western Australia have recorded the most prolonged heat waves. Marble Bar is the only station in the world where temperatures of more than 37.8°C (100°F) have been recorded on as many as 161 consecutive days (30 October 1923 to 7 April 1924).

Heat waves are experienced in the coastal areas from time to time. During 11–14 January 1939, for example, a severe heat wave affected south-eastern Australia: Adelaide had a record of 47.6°C on the 12th, Melbourne a record of

45.6°C on the 13th and Sydney a record of 45.3°C on the 14th.

The Kimberley district of Western Australia is the consistently hottest part of Australia in terms of annual average maximum temperature.

Wyndham, for example, has an annual average maximum of 35.6°C.

**Other aspects of climate****Frost**

Frost can cause serious losses of agricultural crops, and numerous climatic studies have been made in Australia relating to specific crops cultivated in local areas.

Frost frequency depends on location and orography, and even on minor variations in topography. In simplified terms, location controls the extent to which the relatively warm ocean temperatures ameliorate those on land (often called ‘continentality’) and, on an even larger scale, location in this context means proximity to the Equator or to the cooler climates towards the south. Orography relates loosely to elevation (noting that an air parcel which rises above a mountain range will cool (by expansion) about 0.6°C for each 100 metres it rises above sea level), and to topography. Topography influences frost on a much more local scale than the other factors. It does this through controlling ‘cold air draining’, which is a night time phenomenon where cool air ‘flows’ down hillsides and accumulates in low lying areas, occasionally causing ‘frost hollows’ with very low temperatures. The topographic effect is largely independent of the other factors and can happen anywhere in complex terrain under clear and calm weather conditions.

Frost hazard will be greatest in areas which are away from the immediate coast, are at relatively high elevations and have complex terrain which is conducive to cold air drainage.

The parts of Australia which are most subject to frost are the eastern uplands from north-eastern Victoria to the western Darling Downs in southern Queensland. Most stations in this region experience more than 10 nights a month with readings of 0°C (or under) for three to five months of the year. On Tasmania’s Central Plateau similar conditions occur for three to six months of the year. Frosts may occur within a few miles of the coasts except in the Northern Territory and most of the north Queensland coasts.

Regions in which frosts may occur at any time of the year comprise most of Tasmania, large areas of the tablelands of New South Wales, much of inland Victoria, particularly the north-east, and a small part of the extreme south-west of Western Australia. Over most of the interior of the continent, and on the highlands of Queensland as far north as the Atherton Plateau, frosts commence in April and end in September. Minimum temperatures below 0°C are experienced in most of the subtropical interior in June and July.

The median frost period over the continent varies from over 200 days per year in the south-eastern uplands areas south of the Hunter Valley, to zero days in northern Australia. In the southern regions of the continent, the annual frost period generally decreases from about 100 days inland to below 50 days towards the coast. However, there are appreciable spatial variations depending mainly on local orography. In Tasmania the frost period exceeds 300 days on the uplands and decreases to 100 days near the coast.

The regions of mainland Australia most prone to heavy frosts are the eastern uplands and adjacent areas extending from Victoria through New South Wales to south-eastern Queensland. Stations above 1,000 metres in altitude in the southern parts of these uplands have more than 100 heavy frosts annually, and in the upland areas below 1,000 metres the annual frequency ranges from 100 to about 20. Over the remainder of southern Queensland, New South Wales and Victoria, although there are great spatial variations, the average annual frequency of heavy frosts typically ranges from about 20 inland to 10 towards the coast.

In Tasmania, uplands above 1,000 metres have more than 100 heavy frosts annually and, in neighbouring areas, the frequency is about 100 decreasing to 20 towards the coasts. Even some coastal stations have a relatively high frequency (Swansea, for example, has 16).

The southern half of Western Australia, the whole of South Australia, and the Alice Springs district of the Northern Territory experience heavy frosts. Differences in annual frequencies between places are great, but in general the frequency is about 10 inland decreasing towards the coasts. Some places average more than 20 heavy frosts annually, notably Wandering, Western Australia (22) and Yongala, South Australia (42). At Alice Springs the annual average frequency is 12.

## Humidity

Australia is a dry continent in terms of the water vapour content or humidity of the air, and this element may be compared with evaporation to which it is related. Moisture content can be expressed by a number of parameters, of which the most commonly known is relative humidity. Relative humidity can be thought of as the relative evaporating power of the air; when the humidity is low, a wet surface, like our skin, can evaporate freely. When it is high, evaporation is retarded. People can feel this as discomfort or even stress as the body's ability to perspire (and hence cool) decreases with increasing relative humidity. The combination of high temperature and high humidity is potentially dangerous for people who are active in such conditions.

The main features of the relative humidity pattern are:

- over the interior of the continent there is a marked dryness during most of the year, notably towards the northern coast in the dry season (May–October);
- the coastal fringes are comparatively moist, although this is less evident along the north-west coast of Western Australia where continental effects are marked;
- in northern Australia, the highest values occur during the summer wet season (December–February) and the lowest during the winter dry season (June–August); and
- in most of southern Australia the highest values are experienced in the winter rainy season (June–August) and the lowest in summer (December–February).

## Global radiation

Global (short wave) radiation includes that radiation energy reaching the ground directly from the sun and that received indirectly from the sky, scattered downwards by clouds, dust particles, etc.

A high correlation exists between daily global radiation and daily hours of sunshine. On the north-west coast around Port Hedland, where average daily global radiation is the highest for Australia (640 milliwatt hours), average daily sunshine is also highest, being approximately 10 hours. Sunshine is more dependent on variations in cloud coverage than is global radiation, since the latter includes diffuse radiation from the sky as well as direct radiation from the sun. An example is Darwin where, in



the dry month of July, sunshine approaches twice that of the wet (cloudy) month of January, but global radiation amounts for the two months are comparable.

### Sunshine

Sunshine here refers to bright or direct sunshine. Australia receives relatively large amounts of sunshine although seasonal cloud formations have a notable effect on its spatial and temporal distribution. Cloud cover reduces both incoming solar radiation and outgoing long wave radiation and thus affects sunshine, air temperature and other climatic elements on the Earth's surface.

Most of the continent receives more than 3,000 hours of sunshine a year, or nearly 70% of the total possible. In central Australia and the mid-west coast of Western Australia, totals slightly in excess of 3,500 hours occur. Totals of less than 1,750 hours occur on the west coast and highlands of Tasmania; this amount is only 40% of the total possible per year (about 4,380 hours).

In southern Australia the duration of sunshine is greatest about December when the sun is at its highest elevation, and lowest in June when the sun is lowest. In northern Australia sunshine is generally greatest over the period August to October prior to the wet season, and least over the period January to March during the wet season.

### Cloud

Seasonal changes in cloudiness vary with the distribution of rainfall. In the southern parts of the continent, particularly in the coastal and low-lying areas, the winter months are generally more cloudy than the summer months. This is due to the formation of extensive areas of stratiform cloud and fog during the colder months, when the structure of the lower layers of the atmosphere favours the physical processes resulting in this type of cloud. Particularly strong seasonal variability of cloud cover exists in northern Australia where skies are clouded during the summer wet season and mainly cloudless during the winter dry season. Cloud coverage is greater near coasts and on the windward slopes of the eastern uplands of Australia and less over the dry interior.

### Fog

The formation of fog depends on the occurrence of favourable meteorological elements — mainly temperature, humidity, wind and cloud cover. The nature of the local terrain is important for the development of fog and there is a tendency for this phenomenon to persist in valleys and hollows. The incidence of fog may vary significantly over distances as short as one kilometre.

Fog in Australia tends to be more common in the south than the north, although parts of the east coastal areas are relatively fog-prone even in the tropics. Incidence is much greater in the colder months, particularly in the eastern uplands. Fog may persist during the day, but rarely until the afternoon over the interior. The highest fog incidence at a capital city is at Canberra which has an average of 47 days per year on which fog occurs, 29 of which are in the period May to August. Brisbane averages 20 days of fog per year. Darwin averages only two days per year, in the months of July and August.

### Winds

The mid-latitude anticyclones are the chief determinants of Australia's two main prevailing wind streams. In relation to the west-east axes of the anticyclones these streams are easterly to the north and westerly to the south. The cycles of development, motion and decay of low-pressure systems to the north and south of the anticyclones result in diversity of wind-flow patterns. Wind variations are greatest around the coasts where diurnal land and sea-breeze effects are important.

Orography affects the prevailing wind pattern in various ways, such as the channelling of winds through valleys, deflection by mountains and cold air drainage from highland areas. An example of this channelling is the high frequency of north-west winds at Hobart caused by the north-west to south-east orientation of the Derwent River Valley.

Perth is the windiest capital with an average wind speed of 15.6 km/h; Canberra is the least windy with an average speed of 5.4 km/h.

The highest wind speeds and wind gusts recorded in Australia have been associated with tropical cyclones. The highest recorded gust was 259 km/h at Mardie (near Onslow), Western Australia on 19 February 1975, and gusts reaching 200 km/h have been recorded on several occasions in northern Australia with

cyclone visitations. The highest gusts recorded at Australian capitals were 217 km/h at Darwin and 156 km/h at Perth.

### Droughts

Drought, in general terms, refers to an acute deficit of water supply to meet a specified demand. The best single measure of water availability in Australia is rainfall, although parameters such as evaporation and soil moisture are significant, even dominant in some situations. Demands for water are very diverse, hence the actual declaration of drought conditions for an area will generally also depend on the effects of a naturally occurring water deficit on the principal local industries.

Since the 1860s there have been 10 major Australian droughts. Some of these major droughts could be described as periods consisting of a series of dry spells of various lengths, overlapping in time and space, and totalling up to about a decade. The drought periods of 1895–1903, 1958–68, 1982–83 and 1991–95 were the most devastating in terms of their extent and effects on primary production. The latter drought resulted in a possible \$5b cost to Australia's economy, and \$590m in drought relief by the Commonwealth Government. The remaining major droughts occurred in 1864–66 (and 1868), 1880–86, 1888, 1911–16, 1918–20 and 1939–45.

In this same period, several droughts of lesser severity caused significant losses over large areas of some States. They occurred in 1922–23 and 1926–29, 1933–38, 1946–49, 1951–52, 1970–73 and 1976.

South-eastern Australia (New South Wales, southern Queensland, Victoria, Tasmania and the settled parts of South Australia) contains about 75% of the nation's population, and droughts affecting this region have a markedly adverse impact on the economy. There have been nine severe droughts in south-eastern Australia since 1888, and these were encompassed within the major Australian droughts specified previously, except for the severe drought in 1972–73. Drought definitions and the area of coverage and length of droughts, together with related information, may be obtained from *Year Book Australia, 1988*.

### Floods

Widespread flood rainfall may occur anywhere in Australia, but it has a higher incidence in the north and in the eastern coastal areas. It is most

economically damaging along the shorter streams flowing from the eastern uplands eastward to the seaboard of Queensland and New South Wales. These flood rains are notably destructive in the more densely populated coastal river valleys of New South Wales — the Tweed, Richmond, Clarence, Macleay, Hunter and Nepean–Hawkesbury — all of which experience relatively frequent flooding. Although chiefly caused by summer rains, they may occur in any season.

The great Fitzroy and Burdekin river basins of Queensland receive flood rains during the summer wet seasons. Much of the run-off due to heavy rain in north Queensland west of the eastern uplands flows southward through the normally dry channels of the network of rivers draining the interior lowlands into Lake Eyre. This widespread rain may cause floods over an extensive area, but it soon seeps away or evaporates, occasionally reaching the lake in quantity. The Condamine and other northern tributaries of the Darling also carry large volumes of water from flood rains south through western New South Wales to the Murray, and flooding occurs along their courses at times.

Flood rains occur at irregular intervals in the Murray–Murrumbidgee system of New South Wales and Victoria, the coastal streams of southern Victoria and the north coast streams of Tasmania.

## Water resources

Rainfall, or the lack of it, is the most important single factor determining land use and rural production in Australia. The scarcity of both surface and ground water resources, together with the low rates of precipitation which restrict agriculture (quite apart from economic factors), has led to extensive programs to regulate supplies by construction of dams, reservoirs, large tanks and other storages.

The major topographical feature affecting the rainfall and drainage patterns in Australia is the absence of high mountain barriers. Australia's topographical features encompass sloping tablelands and uplands along the east coast Main Divide, the low plain and marked depression in the interior, and the Great Western Plateau.

Only one-third of the Australian land area drains directly to the ocean, mainly on the coastal side of the Main Divide and inland with the Murray–Darling system. With the exception of

the latter, most rivers draining to the ocean are comparatively short, but account for the majority of the country's average annual discharge. Surface drainage is totally absent from some arid areas of low relief.

Australia's large area (7.7 million km<sup>2</sup>) and latitudinal range (3,700 km) have resulted in climatic conditions ranging from alpine to tropical. Two-thirds of the continent is arid or semi-arid, although good rainfalls (over 800 mm annually) occur in the northern monsoonal belt under the influence of the Australian–Asian monsoon, and along the eastern and southern highland regions under the influence of the great atmospheric depressions of the Southern Ocean. The effectiveness of the rainfall is greatly reduced by marked alternation of wet and dry seasons, unreliability from year to year, high temperatures and high potential evaporation.

The availability of water resources controls, to a large degree, the possibility and density of settlement; this in turn influences the quality of the water through production and disposal of waste. Most early settlements were established on the basis of reliable surface water supplies and, as a result, Australia's population is concentrated along the coast, mainly in the comparatively fertile, well-watered east, south-east and far south-west.

As settlement spread into the dry inland grazing country, the value of reliable supplies of underground water was realised. Observations of the disappearance of large quantities of the

rainfall precipitated on the coastal ranges of eastern Australia eventually led to the discovery of the Great Artesian Basin which has become a major asset to the pastoral industry. Development, however, has not been without costs. Significant environmental degradation and deterioration in water quality are becoming evident. Table 1.11 summarises Australia's major ground water resources.

Permanent rivers and streams flow in only a small part of the continent. The average annual discharge of Australian rivers has been recently assessed at 397 teralitres, of which 100 teralitres are now estimated to be exploitable on a sustained yield basis. This is small in comparison with river flows on other continents.

In addition, there is a pronounced concentration of run-off in the summer months in northern Australia, while the southern part of the continent has a distinct, if somewhat less marked, winter maximum.

Even in areas of high rainfall, large variability in flow means that, for local regional development, most streams must be regulated by surface storage. However, in many areas evaporation is so great that storage costs are high in terms of yield. Extreme floods also add greatly to the cost of water storage, because of the need for adequate spillway capacity.

Table 1.12 provides a broad comparison of rainfall and run-off by continent. Table 1.13 summarises Australia's surface water resources.

**1.11 MAJOR GROUND WATER RESOURCES**

| State/Territory    | Area of aquifers<br>km <sup>2</sup> | Ground water resource     |                |                |              |               |                               |
|--------------------|-------------------------------------|---------------------------|----------------|----------------|--------------|---------------|-------------------------------|
|                    |                                     | Major divertible resource |                |                |              |               | Abstraction<br>during 1983–84 |
|                    |                                     | Fresh<br>GL               | Marginal<br>GL | Brackish<br>GL | Saline<br>GL | Total<br>GL   |                               |
| New South Wales    | 595 900                             | 881                       | 564            | 431            | 304          | 2 180         | 242                           |
| Victoria           | 103 700                             | 469                       | 294            | 69             | 30           | 862           | 146                           |
| Queensland         | 1 174 800                           | 1 760                     | 683            | 255            | 144          | 2 840         | 962                           |
| South Australia    | 486 100                             | 102                       | 647            | 375            | 86           | 1 210         | 504                           |
| Western Australia  | 2 622 000                           | 578                       | 1 240          | 652            | 261          | 2 740         | 355                           |
| Tasmania           | 7 240                               | 47                        | 69             | 8              | —            | 124           | 5                             |
| Northern Territory | 236 700                             | 994                       | 3 380          | 43             | 10           | 4 420         | 24                            |
| <b>Australia</b>   | <b>5 226 440</b>                    | <b>4 831</b>              | <b>6 877</b>   | <b>1 833</b>   | <b>835</b>   | <b>14 376</b> | <b>2 238</b>                  |

Source: Australian Water Resources Council, 1987.

## 1.12 RAINFALL AND RUN-OFF OF THE CONTINENTS

| Continent     | Area<br>km <sup>2</sup> | Average yearly<br>rainfall<br>mm | Run-off<br>mm | Run-off<br>% | Run-off<br>km <sup>3</sup> |
|---------------|-------------------------|----------------------------------|---------------|--------------|----------------------------|
| Africa        | 30 300 000              | 690                              | 260           | 38           | 7 900                      |
| Asia          | 45 000 000              | 600                              | 290           | 48           | 13 000                     |
| Australia     | 7 700 000               | 465                              | 57            | 12           | 440                        |
| Europe        | 9 800 000               | 640                              | 250           | 39           | 2 500                      |
| North America | 20 700 000              | 660                              | 340           | 52           | 6 900                      |
| South America | 17 800 000              | 1 630                            | 930           | 57           | 16 700                     |

Source: Department of Resources and Energy, 1983.

## 1.13 SURFACE WATER RESOURCES

| State/Territory              | Area<br>km <sup>2</sup> | Surface water resource          |                                 |                           |                |                |              |                |                             |
|------------------------------|-------------------------|---------------------------------|---------------------------------|---------------------------|----------------|----------------|--------------|----------------|-----------------------------|
|                              |                         | Mean<br>annual<br>run-off<br>GL | Mean<br>annual<br>outflow<br>GL | Major divertible resource |                |                |              | Total<br>GL    | Developed<br>resource<br>GL |
|                              |                         |                                 |                                 | Fresh<br>GL               | Marginal<br>GL | Brackish<br>GL | Saline<br>GL |                |                             |
| New South Wales              | 802 000                 | 42 400                          | 37 200                          | 16 900                    | —              | —              | —            | 16 900         | 7 970                       |
| Victoria                     | 228 000                 | 19 200                          | 18 800                          | 9 050                     | 240            | 120            | —            | 9 810          | 5 990                       |
| Queensland                   | 1 730 000               | 159 000                         | 158 000                         | 32 700                    | —              | —              | —            | 32 700         | 3 840                       |
| South Australia              | 984 000                 | 2 120                           | 1 250                           | 193                       | 109            | 59             | 20           | 384            | 124                         |
| Western Australia            | 2 520 000               | 39 900                          | 39 700                          | 10 200                    | 516            | 856            | 168          | 11 700         | 2 340                       |
| Tasmania                     | 68 200                  | 52 900                          | 52 900                          | 10 800                    | —              | —              | —            | 10 900         | 1 020                       |
| Northern Territory           | 1 350 000               | 81 200                          | 79 200                          | 17 700                    | —              | —              | —            | 17 700         | 59                          |
| Australian Capital Territory | 2 400                   | 549                             | 549                             | 175                       | —              | —              | —            | 175            | 106                         |
| <b>Australia</b>             | <b>7 684 600</b>        | <b>397 300</b>                  | <b>387 600</b>                  | <b>97 700</b>             | <b>865</b>     | <b>1 040</b>   | <b>190</b>   | <b>100 300</b> | <b>21 500</b>               |

Source: Australian Water Resources Council, 1987.

The portion of run-off able to be diverted for use is very low compared with other continents, and results from the high variability of stream flow, high rates of evaporation and the lack of storage sites on many catchments. On an Australia-wide basis, only 21.5% of the divertible resource has currently been developed for use; much of the remaining resource is available in remote regions where development is impractical and uneconomic. In areas such as the Murray–Darling Division, where water is scarce, there are few resources not yet developed, and management is focusing on greater efficiency in water use.

Water resources are assessed within a framework comprising four levels:

- the total water resource is the volume of water present in the environment, measured as mean annual run-off for surface water, and mean annual recharge for ground water;
- the divertible resource is the portion of run-off and recharge which can be developed for use;

- the developed resource is the portion of the divertible resource which has been developed for use; and
- resource utilisation is a measure of the portion of the developed resource which is actually used.

Emphasis is given to the second level of assessment, the divertible resource, as the prime measure of the resource. The divertible resource is defined as the average annual volume of water which, using current technology, could be removed from developed or potential surface water or ground water sources on a sustained basis, without causing adverse effects or long-term depletion of storages.

Australia's water resources are managed by a large number of resource management agencies, irrigation authorities, metropolitan water boards, local government councils and private individuals. State authorities dominate the assessment and control of water resources as, under the Commonwealth Constitution, primary responsibility for management of water rests

with the individual State Governments. The Commonwealth Government is responsible for matters relating to the Territories, and participates indirectly through financial assistance or directly in the coordination or operation of interstate projects through bodies such as the Murray–Darling Basin Commission.

A description of the management, main storage and use of water resources across the States and Territories is contained in the chapter, Water resources, in the 1994 and earlier editions of *Year Book Australia*.

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# Climate variability and El Niño

(This article has been contributed by the Bureau of Meteorology.)

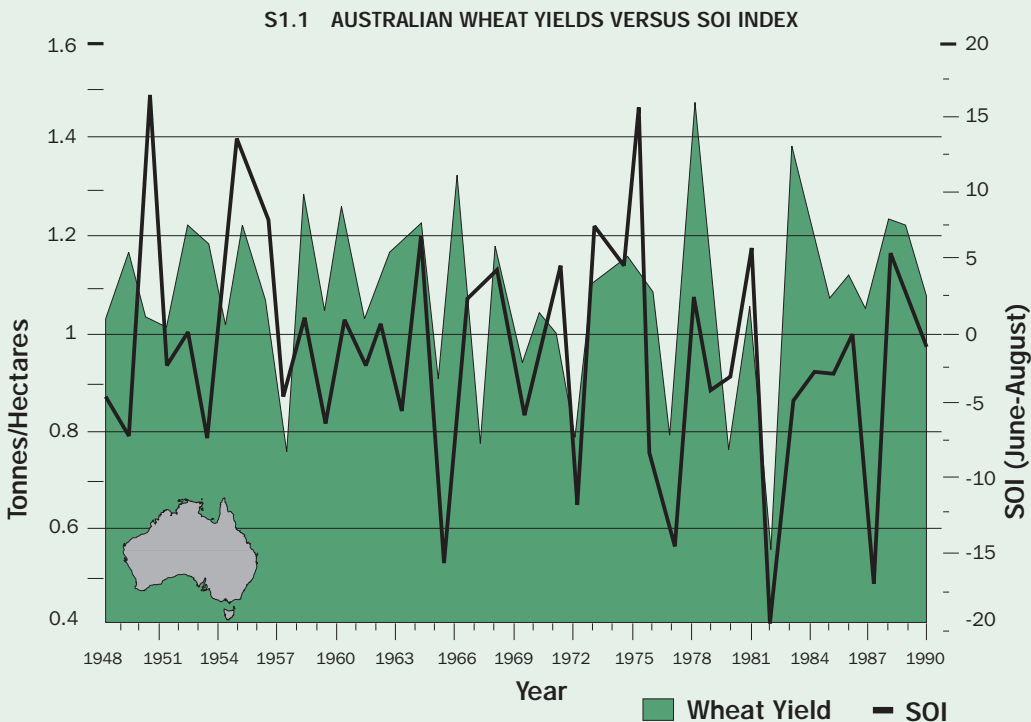
## Introduction

Generations of Australian school children have learned a poet's phrase describing their country as 'a land of droughts and flooding rains'. Today's scientists talk in terms of the continent's large climate variability from season to season, and from year to year.

The impact of climate variability on Australia was highlighted by events during the 1990s. In 1990–91 the wet season produced abundant rains, yet it failed almost completely the following year as drought set in across Queensland and New South Wales. Many people in southeast Australia will long remember the floods of spring 1992 and spring 1993, and the cool summers which followed. Dry conditions returned during the second half of 1994 and during the strong El Niño event of 1997.

What causes these fluctuations? They are connected with the climate phenomenon called the Southern Oscillation, a major air pressure shift between the Asian and east Pacific regions whose best-known extremes are El Niño events. The Southern Oscillation (strength and direction) is measured by a simple index, the Southern Oscillation Index (SOI), defined later. Rural productivity, especially in Queensland and New South Wales, is linked to the behaviour of the Southern Oscillation. Graph S1.1 shows how Australia's wheat yield (trend over time removed) has fluctuated with variations in the Southern Oscillation. Negative phases in the oscillation (drier periods) tend to have been linked with reduced wheat crops, and vice versa.

Tourism is also vulnerable to large swings in seasonal climate. Because climate variability can affect the Australian economy, it is important to understand the physical mechanisms controlling this dramatic feature of Australia's climate.



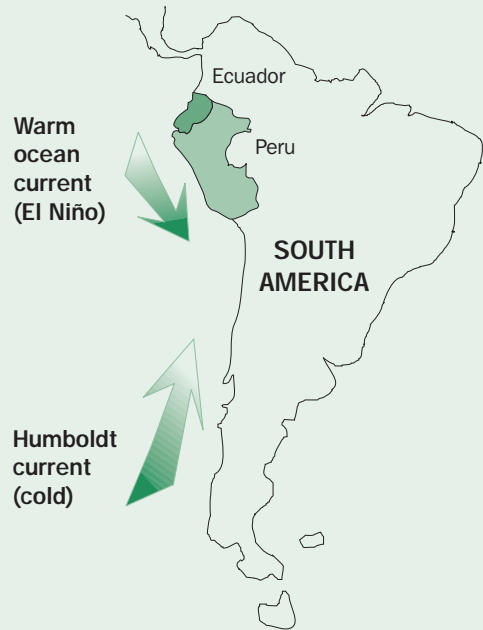
### Why 'El Niño'

El Niño translates from Spanish as 'the boy-child'. Peruvian anchovy fishermen traditionally used the term — a reference to the Christ child — to describe the appearance, around Christmas, of a warm ocean current off the South American coast, adjacent to Ecuador and extending into Peruvian waters (map S1.2). El Niño affects traditional fisheries in Peru and Ecuador. In most years, colder nutrient-rich water from the deeper ocean is drawn to the surface near the coast (upwelling), producing abundant plankton, food source of the anchovy. However, when upwelling weakens in El Niño years, and warmer low-nutrient water spreads along the coast, the anchovy harvest plummets. It was ruined in the four or five most severe El Niño events this century.

### El Niño's global effects

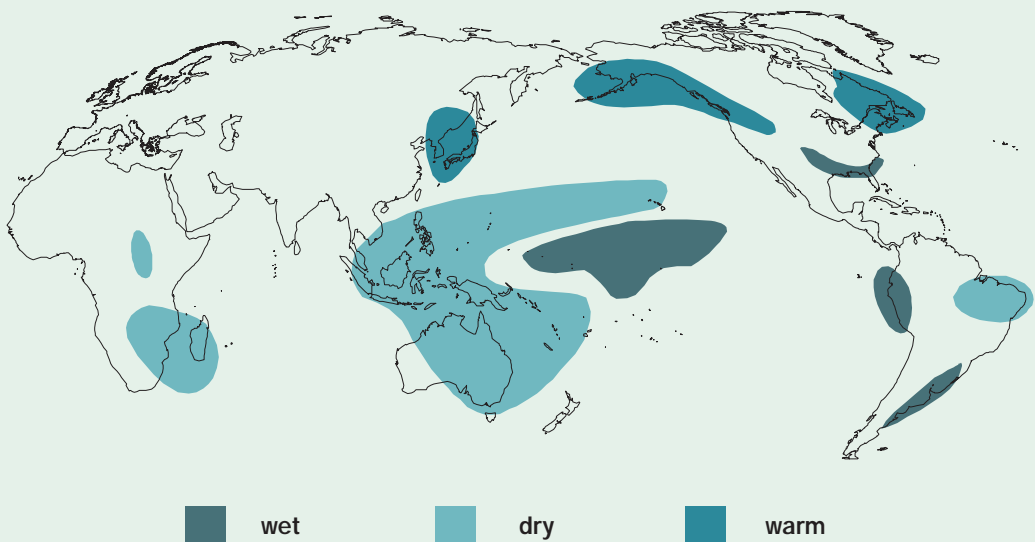
The South American El Niño current is caused by large-scale interactions between the ocean and atmosphere. Today, the term El Niño refers to a sequence of changes in circulations across the Pacific Ocean and Indonesian archipelago when warming is particularly strong (on average every three to eight years). Characteristic changes in the atmosphere accompany those in the ocean, resulting in altered weather patterns across the globe (map S1.3).

S1.2 HOME OF EL NIÑO



El Niño episodes bring a warm ocean current to the South American coast.

S1.3 AREAS MOST CONSISTENTLY AFFECTED BY EL NIÑO





## The Pacific Ocean's circulation features

The Pacific Ocean is a huge mass of water which controls many climate features in its region. Its equatorial expanse, far larger than the Indian or Atlantic Oceans, is critical to the development of the Southern Oscillation and El Niño. In most years the Humboldt current brings relatively cold water northward along the west coast of South America, an effect increased by upwelling of cold water along the Peruvian coast. The cold water then flows westward along the equator and is heated by the tropical sun. These normal conditions make the western Pacific about 3°C to 8°C warmer than the eastern Pacific. However, in El Niño years the central or eastern Pacific may become as warm as the western Pacific.

## The Walker circulation

The Walker circulation is named after Sir Gilbert Walker, a Director-General of British observatories in India who, early this century, identified a number of relationships between seasonal climate variations in Asia and the Pacific region.

The easterly Trade Winds are part of the low-level component of the Walker circulation. Typically, the Trades bring warm moist air towards the Indonesian region. Here, moving over normally very warm seas, moist air rises to high levels of the atmosphere. The air then travels eastward before sinking over the eastern Pacific Ocean. The rising air is associated with a region of low air pressure, towering cumulonimbus clouds and rain. High pressure and dry conditions accompany the sinking air. The wide variations in patterns and strength of the Walker circulation from year to year are shown in map S1.4.

### S1.4 TYPICAL WALKER CIRCULATION PATTERN

## The Southern Oscillation

“By the Southern Oscillation is implied the tendency of pressure at stations in the Pacific ... to increase, while pressure in the region of the Indian Ocean ... decreases.”

— Sir Gilbert T. Walker, 1924

This definition remains valid. We now say that the Southern Oscillation occurs because of the large changes in the Walker circulation closely linked to the pattern of tropical Pacific sea temperatures.

## The Southern Oscillation Index (SOI)

The Southern Oscillation Index (SOI) gives us a simple measure of the strength and phase of the Southern Oscillation, and indicates the status of the Walker circulation. The SOI is calculated from the monthly or seasonal fluctuations in the air pressure difference between Tahiti and Darwin. The ‘typical’ Walker circulation pattern shown in graph S1.4 has an SOI close to zero (Southern Oscillation close to the long-term average state). When this pattern is strong the SOI is strongly positive (Southern Oscillation at one extreme of its range). When the Walker circulation enters its El Niño phase, the SOI is strongly negative (Southern Oscillation at the other extreme of its range).

Positive values of the SOI are associated with stronger Pacific trade winds and warmer sea temperatures to the north of Australia. Together these give a high probability that eastern and northern Australia will be wetter than normal. During El Niño episodes, the Walker circulation weakens, seas around Australia cool, and slackened trade winds feed less moisture into the Australian/Asian region. There is then a high probability that eastern and northern Australia will be drier than normal.

## Climate clues to El Niño

Meteorologists watch for changes to the atmosphere and ocean circulation which help them detect an El Niño, or forecast its lifetime. Indicators are:

- the Walker circulation and trade winds weaken. During more intense El Niño

episodes, westerly winds are observed over parts of the equatorial western and central Pacific;

- the area of warm water usually over the western tropical Pacific cools and the warmest water is displaced eastward to the central Pacific;
- the normally cold waters on the South American coast warm by 2°C to 8°C;
- the Southern Oscillation Index remains negative; and
- enhanced cloudiness develops over the central equatorial Pacific.

Map S1.5 shows some areas of drought since 1951 that have been related to an El Niño episode.

## El Niño’s opposite phase

When the Southern Oscillation Index sustains high positive values, the Walker circulation intensifies, and the eastern Pacific cools. These changes often bring widespread rain and flooding to Australia — this phase is sometimes called anti-El Niño (or La Niña). Australia’s strongest recent examples were in 1973–74 (Brisbane’s worst flooding this century in January 1974) and 1988–89 (vast areas of inland Australia had record rainfall in March 1989).

## Forecasting El Niño

Scientists have made important advances in understanding El Niño/Southern Oscillation (ENSO) phenomena in recent decades. These led to the National Climate Centre’s launch of the Seasonal Climate Outlook Service in 1989. The service offers medium-term (three months ahead) outlooks of rainfall. A new ocean model looks at ocean temperatures to six months ahead and beyond in an attempt to look to how long the El Niño conditions will last. Summary information is available on the Australian Bureau of Meteorology’s Internet Web site (<http://www.bom.gov.au/>), on the pollfax facsimile service known as ‘Weather by Fax’, and through detailed information provided in a monthly publication available by subscription. Useful predictions of seasonal rainfall have the potential to contribute to the goals of sustainable development in the rural sector.

S1.5 EL NIÑO RELATED DROUGHT AREAS IN AUSTRALIA SINCE 1951

Changes in Australian rainfall have been strongly linked to El Niño Southern Oscillation patterns. However, work continues to identify other climate shifts associated with ENSO events in order to help forecast these changes for Australia. Studies for Queensland and northern New South Wales have shown that the number of frosts is likely to increase during an El Niño event, with frosts occurring later in the year than normal, thereby putting new spring growth at risk.

Recent work in the Bureau's Research Centre has shown significant potential for seasonal temperature outlooks. Early results suggest that during an El Niño spring there is a slight tendency for an increase in the frequency of hot days as well as an overall increase in the average maximum temperature. A similar but more pronounced pattern is evident in summer.

## The 1997 El Niño event

The signs of a developing El Niño event emerged during autumn 1997 when the Southern Oscillation Index (SOI) began a rapid decline. In early May the National Climate Centre issued advice that there was a strong chance of an El Niño event developing, as the SOI and other important indicators from the tropical Pacific pointed to further strengthening of the emerging pattern.

The majority of El Niño events in the historical record had their genesis in autumn and an approximate 12-month life cycle, including a decay phase beginning in either the summer or autumn of the following year. This tendency for events to be 'locked' to the seasonal cycle is fundamental to the science of climate prediction and enables a much higher level of predictability than would otherwise be the case.

The 1997 El Niño event followed the historical pattern of development in its timing, but was unusual in that it gained intensity much more rapidly than most previous events, particularly in terms of ocean temperature anomalies. Concurrent with the dramatic fall in SOI values was the development of a large body of anomalously warm water in the eastern equatorial Pacific, a classic sign of El Niño. By late July 1997, ocean temperatures in the far eastern equatorial Pacific were about 4°C above normal, the strongest anomalies since the 1982–83 event, and unusually intense for this stage of an event. Even in a strong event, which this was, it would be more typical to see

anomalies of this magnitude in late spring or summer.

Winter 1997 rainfall was below average for much of Australia. However timely falls in spring 1997 greatly improved harvest prospects. This was a blessing particularly to parts of Victoria which had experienced the driest 11 months on record up to the end of August 1997. It is important to note that each El Niño event is unique with respect to rainfall patterns and areas affected by dry conditions. Although 1997's El Niño event was classed as a 'strong' event, i.e. the climate indicators were a long way from normal, it does not necessarily follow that the stronger the event, the drier the conditions.

World attention focused on the 1997 El Niño event — improved communications since the 1982–83 event and the realities of a global on-line economy meant that information spread quickly and was readily accessible. The ENSO phenomenon had effects in various parts of the globe, including severe droughts and choking bushfires arising from dry conditions which affected South-east Asia including nearby Papua New Guinea and Indonesia.

In the last decade, computer models have developed in their ability to predict ocean temperatures. However we need other methods to gain an idea of the kind of rainfall patterns Australia can expect during an El Niño event. Analysing the rainfall from previous El Niño events is the best guide as to the likely evolution of rainfall patterns across the country beyond the prediction period of the Bureau's statistical Seasonal Outlook. A method of matching this event with similar years is to compare the SOI behaviour over the past nine months with a span of similar calendar months from the historical record. The closest matches are then chosen. Applying this method of SOI comparison to the 1997 event, the eight years which most closely match the current event up to the end of July (called SOI analogues) are: 1972, 1982, 1991, 1977, 1946, 1965, 1994, and 1914, which are all El Niño years. Winter/spring rainfall maps for these years are available through the Bureau's Internet Web site.

## The future

A large proportion of Australia's natural environment is farmed, harvested or managed by farmers. Many renewable resources, from topsoil to wildlife, are broadly under rural sector management. Rural communities need the best

climate advice to help them protect and sustain national ecological resources in the face of climate extremes. Improved understanding of climate variability, and application of appropriate management techniques, will be crucial to achieving sustainable development goals.

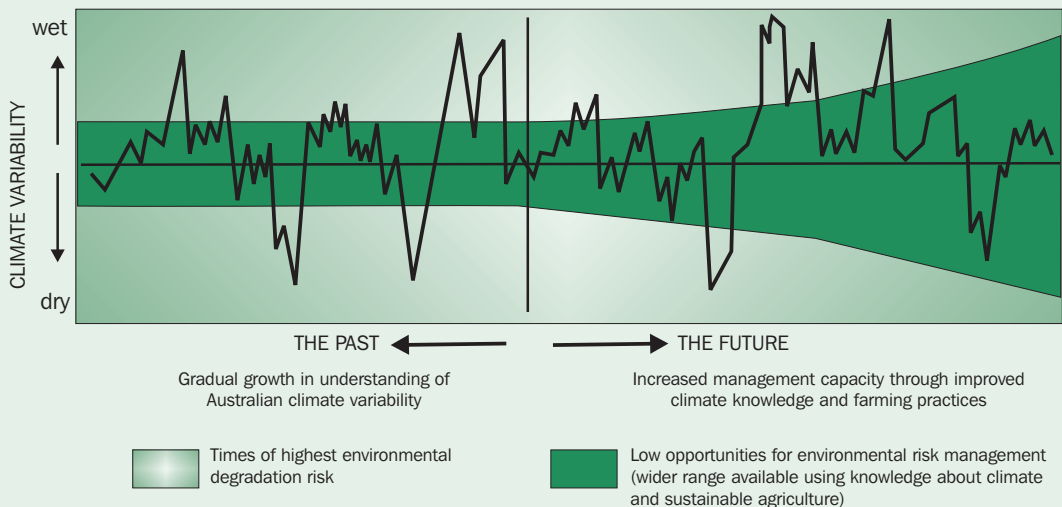
Sustainable development requires improved management in all climate ranges, especially during climate extremes, which bring the greatest risk of environmental degradation. Graph 1.6 suggests how improved climate

understanding and forecast skill may increase the range of low-risk conditions, and enhance our capacity to better manage high-risk periods.

El Niño is one of the significant climate indicators we know of that can warn us of shifts in weather patterns. Even so, our climate will continue to vary all by itself as it has done for centuries — we are unlikely to ever understand it fully and warn of all these occasions. However, El Niño is one indicator we can use to warn of dry times ahead.

## S1.6 MANAGING FOR THE IMPACT OF CLIMATE ON AGRICULTURE

The graph sketches a fairly typical pattern of climate variability





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## Introduction

There are three levels of government in Australia: Federal, State and local.

The six Australian colonies federated in 1901 to form the Commonwealth of Australia. Most of the Commonwealth Parliament's legislative powers are enumerated in Section 51 of the Constitution. Areas of power not specified remain the responsibility of the States and Territories. A system of local government, established under State legislation, creates a third tier of government. In 1996, Australia had 842 elected members of Parliament, of whom 224 were Commonwealth and 618 State and Territory members.

Both the State and the Commonwealth systems of government derive from the British Westminster system, although many features of the Commonwealth Constitution (including the federal structure) are based on the United States Constitution. Generally, however, the salient features of the Westminster system have been retained. Ministers are members of Parliament, and are required to be accountable and answerable to it. In the twentieth century, Australia has been characterised by a strong party system and adversarial style of politics between the government and opposition.

This chapter outlines the basic features of the constitutional structure of the Commonwealth Parliament and Government and its electoral system, and the role of the Commonwealth Parliament and its relationship to the Executive, and provides details of the Ministry and other political leaders.

The Australian Constitution is reproduced in Year Book Australia from time to time, the latest being the 1992 edition.

A chapter outlining Australia's prehistory to Federation was contained in the 1991 and earlier Year Books.

## Parliamentary government

### Scheme of parliamentary government

Under the Australian Constitution the legislative power of the Commonwealth of Australia is vested in the Parliament of the Commonwealth, which consists of the Queen, the Senate and the

House of Representatives. The Queen is represented throughout the Commonwealth by the Governor-General. In each Australian State there is a State Governor, who is the representative of the Queen for the State. The Governor has such powers within the State as are conferred upon him/her by the Letters Patent constituting his/her office, and he/she exercises these powers in accordance with instructions issued to him/her by the Queen, detailing the manner in which his/her duties are to be fulfilled.

No Act of the Parliament of the United Kingdom passed after the commencement of the *Australia Act 1986* extends, or is deemed to extend, to the Commonwealth of Australia or to an Australian State or Territory as part of the law of the Commonwealth, of the State or of the Territory. Further, the restrictions that formerly existed on the legislative powers of the Parliaments of the States were removed by the Act.

In the Commonwealth Parliament the Upper House is known as the Senate, and in the bicameral State Parliaments as the Legislative Council. The Legislature in all States was bicameral until 1922 when the Queensland Parliament became unicameral upon the abolition of the Upper House. In the Commonwealth Parliament the Lower House is known as the House of Representatives; in the State Parliaments of New South Wales, Victoria and Western Australia as the Legislative Assembly; and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The single House of Parliament in Queensland, the Northern Territory and the Australian Capital Territory is known as the Legislative Assembly. The extent of the legislative powers of each of the Parliaments is defined by the Australian and State Constitutions, respectively. In those States that have a bicameral legislature, the Legislative Assembly or House of Assembly, as the case may be, is the larger House.

The members of the Parliaments of each State are elected by the people, the franchise extending to Australian citizens who are at least 18 and possess certain residential qualifications. For the Commonwealth Parliament the qualifications for the franchise are identical for both Houses, extending to Australian citizens and British subjects (on the electoral roll on 25 January 1984) who are 18 or older. See also the later section *Qualifications for membership and for franchise*.

## The Sovereign

On 7 February 1952 the then Governor-General of the Commonwealth of Australia, acting with advice of members of the Federal Executive Council, proclaimed Princess Elizabeth as 'Queen Elizabeth the Second, Queen of this Realm and of all Her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia'. By the *Royal Style and Titles Act 1973*, which Her Majesty assented to in Canberra on 19 October 1973, the Commonwealth Parliament assented to the adoption by Her Majesty, for use in relation to Australia and its Territories, of the Style and Titles set out in the Schedule to that Act. On the same day, also in Canberra, Her Majesty issued a Proclamation, under the Great Seal of Australia, appointing and declaring that Her Majesty's Style and Titles should henceforth be, in relation to Australia and its Territories, 'Elizabeth the Second, by the Grace of God Queen of Australia and Her other Realms and Territories, Head of the Commonwealth'.

## The Governor-General

### Powers and functions

Under the Australian Constitution, the Governor-General exercises the executive power of the Commonwealth of Australia, and certain other powers and functions conferred by the Constitution that include, among others, the powers to appoint times for holding the sessions of the Parliament, to prorogue Parliament, and to dissolve the House of Representatives; to cause writs to be issued for general elections of members of the House of Representatives; to assent in the Queen's name to a proposed law passed by both Houses of the Parliament; to choose and summon Executive Councillors, who hold office during the Governor-General's pleasure; and to appoint Ministers of State for the Commonwealth of Australia. In addition, the Governor-General, as the Queen's representative, is Commander-in-Chief of the Defence Forces.

Many Acts of the Commonwealth Parliament provide that the Governor-General may make regulations to give effect to the Acts. The Governor-General may also be authorised by statute to issue proclamations, for example, to declare an Act in force. The Governor-General has been given power by statute to legislate for certain of the Australian Territories. Under the provisions of the Constitution, as well as by the

conventions of responsible government in British Commonwealth countries, the Governor-General's executive functions are exercised on the advice of Ministers of State.

### Holders of office

The present Governor-General is His Excellency the Honourable Sir William Patrick Deane, AC, KBE. Those persons who have held the office of Governor-General from the inception of the Commonwealth of Australia until 1988 are pictured in *Year Book Australia, 1988*.

### Administrators

In addition to the holders of the office of Governor-General, certain persons have, from time to time, been appointed by the Queen to administer the Government of the Commonwealth of Australia. These persons are appointed in the event of the death, incapacity, removal from office or absence from Australia of the Governor-General.

## Governors of the States

### Powers and functions

The Queen is represented in each of the Australian States by a Governor, the office having been constituted by Letters Patent issued under the Great Seal of the United Kingdom on various dates. The Governors of the States exercise prerogative powers conferred on them by these Letters Patent, their commissions of appointment and the Governor's Instructions given to them under the Royal Sign Manual and Signet or other instrument, as specified in the Letters Patent. In addition, they have been invested with various statutory functions by State Constitutions and the Commonwealth *Australia Act 1986*, as well as under the Acts of the Parliaments of the States.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State. Since the enactment of the *Australia Act 1986*, an Act of Parliament of a State that has been assented to by the Governor of the State is no longer subject to disallowance by the Queen or suspension pending signification of the Queen's pleasure. The Governor administers the prerogative of mercy by the reprieve or pardon of criminal offenders within his/her jurisdiction, and may remit fines and penalties due to the Crown in right of the State. In the performance of his/her functions generally, particularly those conferred by statute, the Governor of a State acts on the advice of Ministers of State for that State.

**Holders of office**

Table 2.1 shows the Governors of the States at September 1997.

**Commonwealth government**  
**Commonwealth Parliaments and Ministries**

**How are governments formed?**

Under our political system at the Federal level, the Ministry must have the confidence of the House of Representatives. For that reason, the Prime Minister is also the leader of the party or coalition of parties holding a majority of the seats in the House, and ministers are members of the same party or coalition. In most cases, new governments are formed after general elections have been held to determine the composition of the House, but a new government could also be formed on any occasion between elections if the majority party changes its leader, or loses its majority (e.g. as a result of a by-election), or is defeated in an important vote in the House through the defection of backbench members of the party. Reshuffles of the Ministry may occur at any time between elections; in that case there is no spill of all positions such as occurs in the formation of a new ministry.

After an election, the Governor-General sends for the leader of the party or coalition which has secured a majority in the House of Representatives and commissions that person to form a government. The incoming Prime Minister then goes about the process of finding members of his or her parliamentary party or coalition to serve as ministers in the Government.

**The role of Parliament**

Parliament has four important functions: to provide for the formation of a government; to legislate; to provide a forum for popular representation; and to scrutinise the actions of government.

The formation of a government is the most important outcome of a general election. Either the government is returned, by virtue of retaining a majority of seats in the House of Representatives, or the opposition party or coalition of parties wins a majority, resulting in the formation of a new government.

More than half of Parliament's time is taken up with the consideration of proposed legislation. Between 150 and 250 bills are passed each year. Most bills are not contentious, being 'machinery' legislation necessary for the orderly processes of government. A great many bills are amendment bills, proposing alterations to existing legislation. Most of the bills are government bills, the policies originating in Cabinet or in government departments and composed by parliamentary drafters. Parliamentary deliberation frequently results in amendments to the proposed legislation, often as a result of representations to Senators and Members by those affected by the legislation.

The representation of the people is an important role of those elected to Parliament. Looking after constituents occupies a great deal of their time. The relative importance of this role may be judged by the high proportion of time spent by Members in their electorates and away from Parliament.

**2.1 STATE GOVERNORS, Holders of Office — September 1997**

| State/Territory       | State Governors                                                       |
|-----------------------|-----------------------------------------------------------------------|
| New South Wales       | His Excellency the Honourable Gordon Samuels, AC, QC                  |
| Victoria              | His Excellency the Honourable Sir James Augustine Gobbo, AC, QC       |
| Queensland            | His Excellency Major-General Peter Arnison, AO                        |
| South Australia       | His Excellency Sir Eric James Neal, AC, CVO                           |
| Western Australia     | His Excellency Major-General Philip Michael Jeffery, AC, AO, MC       |
| Tasmania              | His Excellency the Honourable Sir Guy Stephen Montague Green, AC, KBE |
| Northern Territory(a) | His Honour the Administrator Dr Neil Raymond Conn, AO                 |

(a) Administrator of the Northern Territory.

Source: Department of the Parliamentary Library.

The public interest is served by the operations of a range of committees from each House, or joint committees, comprising both Senators and Members, which achieve a non-partisan scrutiny of government operations and conduct frequent inquiries into a range of issues. Committees of the Parliament are established in order that its legislative, inquiry and scrutiny functions can be carried out more thoroughly and with the benefit of expert advice of which committees are able to take advantage. The composition and procedures of committees, being reasonably flexible and informal, allow them to perform these functions better than would the Houses themselves meeting in their chambers.

### Parliament and the executive

The idea that Parliament 'controls' ministers, as well as government policy and the departments and statutory bodies which implement these policies, is a concept which had more relevance in the nineteenth century than it does today. Stable majority party government in the twentieth century is perhaps the main reason for the decline in absolute parliamentary control and for the decline in the influence of Parliament relative to that of the Executive. Government business takes nearly half of the time of the Parliament, and Parliament's agenda is largely determined by Cabinet decisions and the legislative timetabling requirements of ministers. Today it is more realistic to speak of Parliament influencing or guiding the Executive, or of Parliament scrutinising the actions of executive government and recommending or pressing upon it different courses of action. This influence is exerted in many ways through the procedures of each House and through question time in each House.

Two aspects of parliamentary control over executive government are worthy of special mention. The first relates to the legislative power of the Parliament; the second to influence and control through committees of the Parliament. Government bills are debated in each House. Many questions and queries may be raised in the

House of Representatives and amendments are moved there. Because governments enjoy a majority in the House, amendments cannot be forced on government bills; whether or not they are accepted depends on the wishes of the Government.

It is a different story in the Senate, where no government has enjoyed a majority since 1981. If the Government wants legislation passed by the Senate it often has to agree to amendments proposed by the Opposition and minor parties. The Senate is far more active than the House in sending proposed legislation to committees.

Parliamentary influence over executive government takes various forms. At one level the close interest in and scrutiny of proceedings in the House of Representatives means that, although party discipline will ultimately protect the Executive on the floor of the House, members of the House are able to exert powerful but often indirect influence on government.

Table 2.2 shows the number and duration of parliaments since Federation.

Table 2.3 shows the name of each Commonwealth Government Ministry to hold office since 1 January 1901 and the dates of its term of office.

In *Year Book Australia, 1924* the names are given of each Ministry up to the Bruce–Page Ministry together with the names of the successive holders of portfolios therein. *Year Book Australia, 1953* contains a list which covers the period between 9 February 1923, the date on which the Bruce–Page Ministry assumed power, and 31 July 1951, showing the names of all persons who held office in each Ministry during that period. The names of members of subsequent Ministries are listed in issues of *Year Book Australia, 1953* to 1975–76 inclusive, and in successive issues from 1980.

Particulars of the First Howard Ministry are shown in table 2.4.

## 2.2 COMMONWEALTH PARLIAMENTS

| Number of Parliament | Date of opening   | Date of dissolution |
|----------------------|-------------------|---------------------|
| First                | 9 May 1901        | 23 November 1903    |
| Second               | 2 March 1904      | 5 November 1906     |
| Third                | 20 February 1907  | 19 February 1910    |
| Fourth               | 1 July 1910       | 23 April 1913       |
| Fifth                | 9 July 1913       | 30 July 1914(a)     |
| Sixth                | 8 October 1914    | 26 March 1917       |
| Seventh              | 14 June 1917      | 3 November 1919     |
| Eighth               | 26 February 1920  | 6 November 1922     |
| Ninth                | 28 February 1923  | 3 October 1925      |
| Tenth                | 13 January 1926   | 9 October 1928      |
| Eleventh             | 6 February 1929   | 16 September 1929   |
| Twelfth              | 20 November 1929  | 27 November 1931    |
| Thirteenth           | 17 February 1932  | 7 August 1934       |
| Fourteenth           | 23 October 1934   | 21 September 1937   |
| Fifteenth            | 30 November 1937  | 27 August 1940      |
| Sixteenth            | 20 November 1940  | 7 July 1943         |
| Seventeenth          | 23 September 1943 | 16 August 1946      |
| Eighteenth           | 6 November 1946   | 1 October 1949      |
| Nineteenth           | 22 February 1950  | 19 March 1951(a)    |
| Twentieth            | 12 June 1951      | 21 April 1954       |
| Twenty-first         | 4 August 1954     | 4 November 1955     |
| Twenty-second        | 15 February 1956  | 14 October 1958     |
| Twenty-third         | 17 February 1959  | 2 November 1961     |
| Twenty-fourth        | 20 February 1962  | 1 November 1963     |
| Twenty-fifth         | 25 February 1964  | 31 October 1966     |
| Twenty-sixth         | 21 February 1967  | 29 September 1969   |
| Twenty-seventh       | 25 November 1969  | 2 November 1972     |
| Twenty-eighth        | 27 February 1973  | 11 April 1974(a)    |
| Twenty-ninth         | 9 July 1974       | 11 November 1975(a) |
| Thirtieth            | 17 February 1976  | 8 November 1977     |
| Thirty-first         | 21 February 1978  | 19 September 1980   |
| Thirty-second        | 25 November 1980  | 4 February 1983(a)  |
| Thirty-third         | 21 April 1983     | 26 October 1984     |
| Thirty-fourth        | 21 February 1985  | 5 June 1987(a)      |
| Thirty-fifth         | 14 September 1987 | 19 February 1990    |
| Thirty-sixth         | 8 May 1990        | 8 February 1993     |
| Thirty-seventh       | 4 May 1993        | 29 January 1996     |
| Thirty-eighth        | 30 April 1996     | —                   |

(a) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General under section 57 of the Constitution.

Source: *Department of the Parliamentary Library*.

## 2.3 COMMONWEALTH GOVERNMENT MINISTRIES SINCE 1901

|           | Ministry             | Period of office                     |
|-----------|----------------------|--------------------------------------|
| (i)       | BARTON MINISTRY      | 1 January 1901 to 24 September 1903  |
| (ii)      | DEAKIN MINISTRY      | 24 September 1903 to 27 April 1904   |
| (iii)     | WATSON MINISTRY      | 27 April 1904 to 17 August 1904      |
| (iv)      | REID-McLEAN MINISTRY | 18 August 1904 to 5 July 1905        |
| (v)       | DEAKIN MINISTRY      | 5 July 1905 to 13 November 1908      |
| (vi)      | FISHER MINISTRY      | 13 November 1908 to 14 November 1916 |
| (vii)     | DEAKIN MINISTRY      | 2 June 1909 to 29 April 1910         |
| (viii)    | FISHER MINISTRY      | 29 April 1910 to 24 June 1913        |
| (ix)      | COOK MINISTRY        | 24 June 1913 to 17 September 1914    |
| (x)       | FISHER MINISTRY      | 17 September 1914 to 27 October 1915 |
| (xi)      | HUGHES MINISTRY      | 27 October 1915 to 14 November 1916  |
| (xii)     | HUGHES MINISTRY      | 14 November 1916 to 17 February 1917 |
| (xiii)    | HUGHES MINISTRY      | 17 February 1917 to 8 January 1918   |
| (xiv)     | HUGHES MINISTRY      | 10 January 1918 to 9 February 1923   |
| (xv)      | BRUCE-PAGE MINISTRY  | 9 February 1923 to 22 October 1929   |
| (xvi)     | SCULLIN MINISTRY     | 22 October 1929 to 6 January 1932    |
| (xvii)    | LYONS MINISTRY       | 6 January 1932 to 7 November 1938    |
| (xviii)   | LYONS MINISTRY       | 7 November 1938 to 7 April 1939      |
| (xix)     | PAGE MINISTRY        | 7 April 1939 to 26 April 1939        |
| (xx)      | MENZIES MINISTRY     | 26 April 1939 to 14 March 1940       |
| (xxi)     | MENZIES MINISTRY     | 14 March 1940 to 28 October 1940     |
| (xxii)    | MENZIES MINISTRY     | 28 October 1940 to 29 August 1941    |
| (xxiii)   | FADDEN MINISTRY      | 29 August 1941 to 7 October 1941     |
| (xxiv)    | CURTIN MINISTRY      | 7 October 1941 to 21 September 1943  |
| (xxv)     | CURTIN MINISTRY      | 21 September 1943 to 6 July 1945     |
| (xxvi)    | FORDE MINISTRY       | 6 July 1945 to 13 July 1945          |
| (xxvii)   | CHIFLEY MINISTRY     | 13 July 1945 to 1 November 1946      |
| (xxviii)  | CHIFLEY MINISTRY     | 1 November 1946 to 19 December 1949  |
| (xxix)    | MENZIES MINISTRY     | 19 December 1949 to 11 May 1951      |
| (xxx)     | MENZIES MINISTRY     | 11 May 1951 to 11 January 1956       |
| (xxxi)    | MENZIES MINISTRY     | 11 January 1956 to 10 December 1958  |
| (xxxii)   | MENZIES MINISTRY     | 10 December 1958 to 18 December 1963 |
| (xxxiii)  | MENZIES MINISTRY     | 18 December 1963 to 26 January 1966  |
| (xxxiv)   | HOLT MINISTRY        | 26 January 1966 to 14 December 1966  |
| (xxxv)    | HOLT MINISTRY        | 14 December 1966 to 19 December 1967 |
| (xxxvi)   | McEWEN MINISTRY      | 19 December 1967 to 10 January 1968  |
| (xxxvii)  | GORTON MINISTRY      | 10 January 1968 to 28 February 1968  |
| (xxxviii) | GORTON MINISTRY      | 28 February 1968 to 12 November 1969 |
| (xxxix)   | GORTON MINISTRY      | 12 November 1969 to 10 March 1971    |
| (xl)      | McMAHON MINISTRY     | 10 March 1971 to 5 December 1972     |
| (xli)     | WHITLAM MINISTRY     | 5 December 1972 to 19 December 1972  |
| (xlii)    | WHITLAM MINISTRY     | 19 December 1972 to 11 November 1975 |
| (xliii)   | FRASER MINISTRY      | 11 November 1975 to 22 December 1975 |
| (xliv)    | FRASER MINISTRY      | 22 December 1975 to 20 December 1977 |
| (xlv)     | FRASER MINISTRY      | 20 December 1977 to 3 November 1980  |
| (xlvi)    | FRASER MINISTRY      | 3 November 1980 to 7 May 1982        |
| (xlvii)   | FRASER MINISTRY      | 7 May 1982 to 11 March 1983          |
| (xlviii)  | HAWKE MINISTRY       | 11 March 1983 to 13 December 1984    |
| (xlix)    | HAWKE MINISTRY       | 13 December 1984 to 24 July 1987     |
| (l)       | HAWKE MINISTRY       | 24 July 1987 to 4 April 1990         |
| (li)      | HAWKE MINISTRY       | 4 April 1990 to 20 December 1991     |
| (lii)     | KEATING MINISTRY     | 20 December 1991 to 24 March 1993    |
| (liii)    | KEATING MINISTRY     | 24 March 1993 to 11 March 1996       |
| (liv)     | HOWARD MINISTRY      | 11 March 1996                        |

Source: Department of the Parliamentary Library.



## 2.4 FIRST HOWARD MINISTRY, At October 1997

| CABINET MINISTERS                                                                                                               |                                                  |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Prime Minister                                                                                                                  | The Hon. John Winston Howard, MP                 |
| Minister for Trade and Deputy Prime Minister                                                                                    | The Hon. Timothy Andrew Fischer, MP              |
| Treasurer                                                                                                                       | The Hon. Peter Howard Costello, MP               |
| Minister for Primary Industries and Energy                                                                                      | The Hon. John Duncan Anderson, MP                |
| Minister for the Environment and Leader of the Government in the Senate                                                         | Senator the Hon. Robert Murray Hill              |
| Minister for Communications, the Information Economy and the Arts, Deputy Leader of the Government                              | Senator the Hon. Richard Kenneth Robert Alston   |
| Minister for Workplace Relations and Small Business, Leader of the House                                                        | The Hon. Peter Keaston Reith, MP                 |
| Minister for Social Security                                                                                                    | Senator the Hon. Jocelyn Margaret Newman         |
| Minister for Foreign Affairs                                                                                                    | The Hon. Alexander John Gosse Downer, MP         |
| Minister for Industry, Science and Technology and Vice-President of the Executive Council                                       | The Hon. John Colinton Moore, MP                 |
| Minister for Defence                                                                                                            | The Hon. Ian Murray McLachlan, AO, MP            |
| Minister for Health and Family Services                                                                                         | The Hon. Dr Michael Richard Lewis Wooldridge, MP |
| Minister for Finance and Administration                                                                                         | The Hon. John Joseph Fahey, MP                   |
| Minister for Employment, Education, Training and Youth Affairs and Minister Assisting the Prime Minister for the Public Service | The Hon. Dr David Alistair Kemp, MP              |
| Attorney-General                                                                                                                | The Hon. Daryl Robert Williams, AM, QC, MP       |
| Minister for Transport and Regional Development                                                                                 | The Hon. Mark Anthony James Vaile, MP            |
| OUTER MINISTRY                                                                                                                  |                                                  |
| Minister for Immigration and Multicultural Affairs                                                                              | The Hon. Philip Maxwell Ruddock, MP              |
| Minister for Schools, Vocational Education and Training                                                                         | Senator the Hon. Christopher Martin Ellison      |
| Assistant Treasurer                                                                                                             | Senator the Hon. Rod Kemp                        |
| Minister for Resources and Energy                                                                                               | Senator the Hon. Warwick Raymond Parer           |
| Minister for Customs and Consumer Affairs and Deputy Leader of the House                                                        | The Hon. Warren Errol Truss, MP                  |
| Minister for Status of Women                                                                                                    | The Hon. Judith Eleanor Moylan, MP               |
| Minister for Defence Industry, Science and Personnel                                                                            | The Hon. Bronwyn Kathleen Bishop MP              |
| Minister for Justice                                                                                                            | Senator the Hon. Amanda Eloise Vanstone          |
| Minister for Family Services                                                                                                    | The Hon. Warwick Leslie Smith, MP                |
| Minister for Veterans' Affairs                                                                                                  | The Hon. Bruce Craig Scott, MP                   |
| Minister for Aboriginal and Torres Strait Islander Affairs                                                                      | Senator the Hon. John Joseph Herron              |
| Minister for Sport and Tourism Minister Assisting the Prime Minister for the Sydney 2000 Games                                  | The Hon. Andrew Peter Thomson, MP                |
| Special Minister of State, Minister Assisting the Prime Minister                                                                | Senator the Hon. Nicholas Hugh Minchin           |
| Minister for Regional Development, Territories and Local Government                                                             | The Hon. Alexander Michael Somlyay, MP           |
| Parliamentary Secretary (Cabinet) to the Prime Minister                                                                         | The Hon. Christopher Gordon Miles, MP            |
| Parliamentary Secretary to the Minister for Trade                                                                               | Senator the Hon. David Gordon Cadell Brownhill   |
| Parliamentary Secretary to the Treasurer, Manager of Government Business in the Senate                                          | Senator the Hon. Ian Gordon Campbell             |
| Parliamentary Secretary to the Minister for Primary Industries and Energy                                                       | Senator the Hon. Judith Troeth                   |
| Parliamentary Secretary to the Minister for the Environment                                                                     | Senator the Hon. Ian Douglas Macdonald           |
| Parliamentary Secretary to the Minister for Social Security                                                                     | Senator the Hon. Grant Ernest John Tambling      |
| Parliamentary Secretary to the Minister for Foreign Affairs                                                                     | The Hon. Kathryn Jean Sullivan, MP               |
| Parliamentary Secretary to the Minister for Transport and Regional Development                                                  | The Hon. Michael John Clyde Ronaldson, MP        |
| Parliamentary Secretary to the Minister for Health and Family Services                                                          | The Hon. Patricia Mary Worth, MP                 |
| Parliamentary Secretary to the Minister for Employment, Education, Training and Youth Affairs                                   | The Hon. Anthony John Abbott, MP                 |
| Parliamentary Secretary to the Minister for Workplace Relations and Small Business                                              | The Hon. Alan Glyndwr Cadman, MP                 |

Source: Department of the Parliamentary Library.

**Leader of the Opposition**

The Hon. K.C. Beazley, MP (Australian Labor Party) is the leader of the Opposition.

**State of the parties in the Commonwealth Parliament**

The state of the parties in the Commonwealth Parliament at August 1997 is set out in table 2.5.

| 2.5 STATE OF THE PARTIES, Commonwealth Parliament — August 1997 |     |
|-----------------------------------------------------------------|-----|
|                                                                 | no. |
| House of Representatives                                        |     |
| Australian Labor Party                                          | 49  |
| Liberal Party                                                   | 76  |
| National Party of Australia                                     | 18  |
| Independent                                                     | 5   |
| Senate                                                          |     |
| Australian Labor Party                                          | 28  |
| Liberal Party                                                   | 31  |
| Australian Democrats                                            | 7   |
| National Party of Australia                                     | 6   |
| The Greens                                                      | 2   |
| Independent                                                     | 2   |

Source: Department of the Parliamentary Library.

**Numbers and salaries of Commonwealth Government Ministers**

Under sections 65 and 66, respectively, of the Australian Constitution the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000, each provision to operate until the Parliament otherwise provides.

Subsequently, the number and salaries have increased from time to time. As at October 1996 the number of Ministers was 28 and ministerial salaries ranged from \$123,309 for the Prime Minister, to \$80,009 for the Deputy Prime Minister, \$65,209 for the Treasurer and for the Leader of the Government in the Senate, \$57,869 for the Leader of the House, \$53,919 for a Minister in the Cabinet and \$43,136 for Ministers not in the Cabinet. Where more than one office is held only one ministerial salary is payable, that being the higher salary.

All amounts shown above are in addition to the parliamentary salaries and allowances.

**Parliamentary salaries and allowances**

The basic salary payable to a Senator or Member of the House of Representatives was \$81,856 at October 1996. In addition, Senators or Members receive an electoral allowance of \$26,076 in the case of a Senator or a Member representing an electorate of less than 2,000 km<sup>2</sup>, \$31,008 in the case of a Member representing an electorate of 2,000 km<sup>2</sup> or more but less than 5,000 km<sup>2</sup>, or \$37,813 in the case of a Member representing an electorate of 5,000 km<sup>2</sup> or more.

**Parliaments and elections Commonwealth Parliament**

**Qualifications for membership and for franchise**

Any Australian citizen, 18 or over, who is, or is qualified to become, an elector of the Commonwealth Parliament is qualified for membership of either house of the Commonwealth Parliament.

Any Australian citizen (or British subject who was on the Commonwealth Roll as at 25 January 1984) over 18 is qualified to enrol and vote at federal elections. Residence in a subdivision for a period of one month before enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory for all eligible persons.

The principal reasons for disqualification of persons otherwise eligible for election as members of either Commonwealth House are: membership of the other House; allegiance to a foreign power; being attainted of treason; being convicted and under sentence for any offence punishable by imprisonment for one year or longer; being an undischarged bankrupt or insolvent; holding an office of profit under the Crown (with certain exceptions); or having a pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than 25 persons.

Persons convicted of treason and not pardoned, or convicted and under sentence for any offence punishable by imprisonment for five years or longer, or of unsound mind, or persons who are holders of temporary entry permits under the *Migration Act 1958* or who are prohibited



non-citizens under that Act, are excluded from enrolment and voting.

### Representation and elections

From the establishment of the Commonwealth of Australia until 1949 the Senate consisted of 36 members, six being returned by each of the original federating States. The Australian Constitution empowers the Commonwealth Parliament to increase or decrease the size of the Parliament. As the population of Australia had more than doubled since its inception, the Parliament passed the *Representation Act 1948*. This Act provided that there should be 10 Senators from each State instead of six, thus increasing the total to 60 Senators, enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation. The *Representation Act 1983* further provided for 12 Senators for each State from the first meeting of the thirty-fourth Parliament.

The *Senate (Representation of Territories) Act 1973* made provision for two Senators to be elected from both the Northern Territory and the Australian Capital Territory. Elections for the Territory Senators are held at the same time as general elections for the House of Representatives.

In accordance with the Constitution, the total number of State Members of the House of Representatives must be as nearly as practicable twice the total number of State Senators. Consequent upon the increase in the size of the Senate in 1949, the number of State Members was increased from 74 to 121. In 1955 there were 122 State Members; in 1969, 123; in 1974, 124; in 1977, 121; in 1980, 122. From the first meeting of the thirty-fourth Parliament, there was a further increase of 23 to 145 State Members flowing from the increase in the number of State Senators to 72.

Since the redistribution of electorates in 1949 giving effect to the increase in the size of the House of Representatives, further redistributions have taken place in 1955, 1968, 1974 (Western Australia only), 1977, 1979 (Western Australia only), 1984, when the size of the Parliament was increased again, 1988–89 (Victoria and Western Australia only), 1991 (New South Wales, Queensland, South Australia, Tasmania and the

Australian Capital Territory), 1994 (Victoria, Queensland and the Australian Capital Territory) and 1997 (Queensland, Western Australia and the Australian Capital Territory). Redistributions must be held whenever the representation entitlement of a State changes, when more than one-third of the electorates in a State deviate from the quota by more than 10% for more than two months, or every seven years. The quota (or average number) of electors is the basis for electoral distribution. There may be a deviation from the quota of up to 10% in order to achieve equality of enrolment midway between redistributions. In determining boundaries, Redistribution Committees take account of economic, social and regional interests, means of communication and travel, the trend of population changes, physical features and area, and the existing boundaries of electoral divisions.

The Electoral Commissioner determines the representation entitlements of the States and Territories during the tenth month after the first meeting of a new House of Representatives. Determinations are based on the latest population statistics as provided by the Australian Statistician. The quota is ascertained by dividing the number of people of the Commonwealth by twice the number of Senators representing the States. The population of the Territories and all Senators representing the Territories are excluded from calculation when determining the quota. The population of each State and Territory is then divided by the quota to determine their representation entitlements. If there is a remaining fraction of over half a quota, the State or Territory is entitled to an additional seat. This accounts for the minor fluctuations in the size of the House of Representatives. The representation entitlements of the States and Territories at the most recent determinations are shown in table 2.6, which also shows the total size of the Parliament. Under section 24 of the Constitution, Tasmania remains entitled to the five seats guaranteed to any original State in 1901.

From 1922 to 1968 the Northern Territory was represented in a limited capacity by one member in the House of Representatives. In May 1968 the *Northern Territory Representation Act 1922* was amended to give full voting rights to the Member for the Northern Territory effective from 15 May 1968, the day on which the Act received Royal assent.

## 2.6 REPRESENTATION ENTITLEMENTS, States and Territories

| State/Territory              | 1981       | 1984       | 1988       | 1991       | 1994       | 1997       |
|------------------------------|------------|------------|------------|------------|------------|------------|
| New South Wales              | 43         | 51         | 51         | 50         | 50         | 50         |
| Victoria                     | 33         | 39         | 38         | 38         | 37         | 37         |
| Queensland                   | 19         | 24         | 24         | 25         | 26         | 27         |
| South Australia              | 11         | 13         | 13         | 12         | 12         | 12         |
| Western Australia            | 11         | 13         | 14         | 14         | 14         | 14         |
| Tasmania                     | 5          | 5          | 5          | 5          | 5          | 5          |
| Northern Territory           | 1          | 1          | 1          | 1          | 1          | 1          |
| Australian Capital Territory | 2          | 2          | 2          | 2          | 3          | 2          |
| <b>Total Parliament</b>      | <b>125</b> | <b>148</b> | <b>148</b> | <b>147</b> | <b>148</b> | <b>148</b> |

Source: Department of the Parliamentary Library.

From 1948 to 1967 the Australian Capital Territory was represented in a limited capacity by one member in the House of Representatives. The Member for the Australian Capital Territory was granted full voting rights on 21 February 1967.

Following the passing of the *Australian Capital Territory Representation (House of Representatives) Act 1973* the Australian Capital Territory was divided into two electoral divisions.

Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. At elections for Senators the whole State constitutes the electorate. For the purpose of elections for the House of Representatives the State is divided into single electorates corresponding in number to the number of members to which the State is entitled.

In 1948, amendments to the *Commonwealth Electoral Act 1918* changed the system of scrutiny and counting of votes in Senate elections from the alternative vote to that of proportional representation. The method of voting for both the Senate and the House of Representatives is preferential.

Particulars of voting at Senate elections and elections for the House of Representatives up to 1993 appear in earlier issues of *Year Book Australia*. Full details are contained in the Election Statistics issued by the Electoral Commissioner following each election.

The numbers of electors enrolled and first preference votes cast for the major political parties in each State and Territory at the 1996 election for each House of the Commonwealth Parliament were as shown in tables 2.7 and 2.8.

## 2.7 COMMONWEALTH PARLIAMENTARY ELECTIONS, Electors Enrolled — 2 March 1996

| State/Territory              | no.        |
|------------------------------|------------|
| New South Wales              | 3 955 782  |
| Victoria                     | 2 972 635  |
| Queensland                   | 2 091 384  |
| South Australia              | 1 001 006  |
| Western Australia            | 1 088 487  |
| Tasmania                     | 329 304    |
| Northern Territory           | 98 800     |
| Australian Capital Territory | 203 170    |
| Australia                    | 11 740 568 |

Source: Department of the Parliamentary Library.

## 2.8 COMMONWEALTH PARLIAMENTARY ELECTIONS, Votes Recorded — 2 March 1996

|                                         | NSW              | Vic.             | Qld              | SA                | WA               |
|-----------------------------------------|------------------|------------------|------------------|-------------------|------------------|
| <b>House of Representatives</b>         |                  |                  |                  |                   |                  |
| First preference votes                  |                  |                  |                  |                   |                  |
| Australian Labor Party                  | 1 453 542        | 1 190 404        | 639 510          | 320 678           | 347 583          |
| Liberal Party                           | 1 229 423        | 1 106 556        | 757 621          | 460 246           | 440 647          |
| National Party of Australia             | 443 542          | 128 091          | 306 986          | —                 | 13 333           |
| Country Liberal Party                   | —                | —                | —                | —                 | —                |
| Australian Democrats                    | 240 255          | 203 892          | 129 244          | 93 899            | 55 862           |
| The Greens                              | 95 609           | 52 810           | 47 379           | 27 146            | 53 101           |
| Australians Against Further Immigration | 52 128           | 16 914           | 1 258            | 1 780             | 943              |
| Call to Australia                       | 34 108           | 8 081            | 494              | —                 | —                |
| Others                                  | 125 602          | 66 573           | 45 678           | 16 970            | 89 487           |
| Formal votes                            | 3 674 209        | 2 773 321        | 1 928 170        | 920 719           | 1 000 956        |
| Informal votes                          | 138 157          | 83 615           | 50 605           | 39 172            | 32 616           |
| <i>Total votes recorded</i>             | <i>3 812 366</i> | <i>2 856 936</i> | <i>1 978 775</i> | <i>959 891</i>    | <i>1 033 572</i> |
| <b>Senate</b>                           |                  |                  |                  |                   |                  |
| First preference votes                  |                  |                  |                  |                   |                  |
| Australian Labor Party                  | 1 370 918        | 1 101 497        | 583 850          | 301 094           | 341 580          |
| Liberal Party                           | —                | —                | 680 553          | 428 053           | 456 379          |
| National Party of Australia             | —                | —                | 288 199          | —                 | 20 877           |
| Liberal-National Party                  | 1 522 722        | 1 146 655        | —                | —                 | —                |
| Country Liberal Party                   | —                | —                | —                | —                 | —                |
| Australian Democrats                    | 351 491          | 300 848          | 254 219          | 135 730           | 93 938           |
| The Greens                              | 97 928           | 81 273           | 46 285           | 19 441            | 57 006           |
| Australians Against Further Immigration | 61 811           | 40 607           | 13 117           | 9 424             | 12 645           |
| Call to Australia                       | 72 969           | 16 497           | 9 543            | 6 817             | 7 028            |
| Australian Shooters Party               | 74 032           | 19 573           | 12 146           | 8 973             | —                |
| Others                                  | 130 412          | 60 535           | 36 550           | 24 244            | 14 846           |
| Formal votes                            | 3 682 283        | 2 767 485        | 1 924 462        | 933 776           | 1 004 299        |
| Informal votes                          | 143 388          | 101 789          | 64 979           | 31 552            | 36 369           |
| <i>Total votes recorded</i>             | <i>3 825 671</i> | <i>2 869 274</i> | <i>1 989 441</i> | <i>965 328</i>    | <i>1 040 668</i> |
|                                         | Tas.             | NT               | ACT              | Aust.             |                  |
| <b>House of Representatives</b>         |                  |                  |                  |                   |                  |
| First preference votes                  |                  |                  |                  |                   |                  |
| Australian Labor Party                  | 137 607          | 36 994           | 91 447           | 4 217 765         |                  |
| Liberal Party                           | 138 087          | —                | 78 109           | 4 210 689         |                  |
| National Party of Australia             | 1 218            | —                | —                | 893 170           |                  |
| Country Liberal Party                   | —                | 38 302           | —                | 38 302            |                  |
| Australian Democrats                    | 12 696           | —                | —                | 735 848           |                  |
| The Greens                              | 19 689           | 5 324            | 16 596           | 317 654           |                  |
| Australians Against Further Immigration | —                | —                | —                | 73 023            |                  |
| Call to Australia                       | —                | —                | —                | 42 683            |                  |
| Others                                  | 1 274            | 4 423            | 4 711            | 354 718           |                  |
| Formal votes                            | 310 571          | 85 043           | 190 863          | 10 883 852        |                  |
| Informal votes                          | 7 472            | 2 985            | 5 543            | 360 165           |                  |
| <i>Total votes recorded</i>             | <i>318 043</i>   | <i>88 028</i>    | <i>196 406</i>   | <i>11 244 017</i> |                  |
| <b>Senate</b>                           |                  |                  |                  |                   |                  |
| First preference votes                  |                  |                  |                  |                   |                  |
| Australian Labor Party                  | 120 678          | 38 667           | 81 866           | 3 940 150         |                  |
| Liberal Party                           | 130 552          | —                | 74 949           | 1 770 486         |                  |
| National Party of Australia             | 3 693            | —                | —                | 312 769           |                  |
| Liberal-National Party                  | —                | —                | —                | 2 669 377         |                  |
| Country Liberal Party                   | —                | 40 050           | —                | 40 050            |                  |
| Australian Democrats                    | 22 006           | 1 535            | 19 590           | 1 179 357         |                  |
| The Greens                              | 26 830           | 5 453            | 11 297           | 345 513           |                  |
| Australians Against Further Immigration | —                | —                | —                | 137 604           |                  |
| Call to Australia                       | 1 519            | —                | 2 901            | 117 274           |                  |
| Australian Shooters Party               | —                | —                | —                | 114 724           |                  |
| Others                                  | 3 692            | —                | 1 454            | 271 733           |                  |
| Formal votes                            | 308 970          | 85 705           | 192 057          | 10 899 037        |                  |
| Informal votes                          | 10 083           | 2 422            | 4 860            | 395 442           |                  |
| <i>Total votes recorded</i>             | <i>319 053</i>   | <i>88 127</i>    | <i>196 917</i>   | <i>11 294 479</i> |                  |

Source: Department of the Parliamentary Library.

## Referendums

In accordance with Section 128 of the Constitution, any proposed law for the alteration of the Constitution, in addition to being passed by an absolute majority of each House of Parliament, (except in circumstances specified in Section 128 of the Constitution which permits a referendum to proceed if passed by only one chamber), must be submitted to a referendum of the electors in each State and Territory, and must be approved by a majority of the electors in a majority of the States and by a majority of all the voters who voted, before it can be presented for Royal assent.

Since 1901, 42 proposals have been submitted to referendums. The consent of the electors has been received in eight cases: the first in relation to the election of Senators in 1906, the second (1910) and third (1928) in respect of State Debts, the fourth in respect of Social Services in 1946 and the fifth in respect of Aboriginal people in 1967. The remaining three proposals in relation respectively to Senate casual vacancies, maximum retirement age for justices of the High Court and judges of other Federal Courts, and the right of electors in the Territories to vote in referendums for the alteration of the Constitution, were approved in May 1977. In addition to referendums for alterations of the Constitution, other Commonwealth referendums have been held — two prior to Federation regarding the proposed Constitution and two regarding military service during World War I. A national song poll was held on 21 May 1977. Voting was preferential and, after the distribution of preferences, 'Advance Australia Fair' became the national song of Australia.

For further details of referendums see *Year Book Australia, 1966*, pages 66–68, *Year Book Australia, 1974*, pages 90–91, *Year Book Australia, 1977–78*, pages 72–73 and *Year Book Australia, 1986*, pages 55–56.

## The States and Territories

This section contains summarised information in tables 2.9, 2.10 and 2.11. Readers wanting greater detail should refer to the State Year Books or Territory In Focus publications.

### 2.9 GOVERNMENT LEADERS, States and Territories — August 1997

| State/Territory              | Government Leader                 |
|------------------------------|-----------------------------------|
| New South Wales              | The Hon. R. J. Carr, MP (ALP)     |
| Victoria                     | The Hon. J. G. Kennett, MP (LP)   |
| Queensland                   | The Hon. R. E. Borbidge, MLA (NP) |
| South Australia              | The Hon. J.W. Olsen, MP (LP)      |
| Western Australia            | The Hon. R. Court, MLA (LP)       |
| Tasmania                     | The Hon. T. M. Rundle MLA (LP)    |
| Northern Territory           | The Hon. S. L. Stone MLA (CLP)    |
| Australian Capital Territory | The Hon. K. Carnell, MLA (LP)     |

Source: Department of the Parliamentary Library.

### 2.10 OPPOSITION LEADERS, States and Territories — August 1997

| State/Territory              | Opposition Leader              |
|------------------------------|--------------------------------|
| New South Wales              | The Hon. P. Collins, MP (LP)   |
| Victoria                     | J. M. Brumby, MP (ALP)         |
| Queensland                   | P. Beattie MLA (ALP)           |
| South Australia              | The Hon. M. Rann, MP (ALP)     |
| Western Australia            | G.I.D. Gallop, MP (ALP)        |
| Tasmania                     | The Hon. J.A. Bacon, MHA (ALP) |
| Northern Territory           | M. A. Hickey MLA (ALP)         |
| Australian Capital Territory | W.B. Berry MLA (ALP)           |

Source: Department of the Parliamentary Library.

### 2.11 STATE OF THE PARTIES, States and Territories — October 1997

|                             | no. of seats |
|-----------------------------|--------------|
| <b>New South Wales</b>      |              |
| Legislative Assembly        |              |
| Australian Labor Party      | 51           |
| Liberal Party               | 29           |
| National Party of Australia | 16           |
| Independent                 | 3            |
| Legislative Council         |              |
| Australian Labor Party      | 17           |
| Liberal Party               | 12           |
| National Party of Australia | 6            |
| Independent                 | 4            |
| Australian Democrats        | 2            |
| The Greens                  | 1            |
| <b>Victoria</b>             |              |
| Legislative Assembly        |              |
| Australian Labor Party      | 29           |
| Liberal Party               | 49           |
| National Party of Australia | 9            |
| Independent                 | 1            |
| Legislative Council         |              |
| Australian Labor Party      | 10           |
| Liberal Party               | 28           |
| National Party of Australia | 6            |

...continued

### 2.11 STATE OF THE PARTIES, States and Territories — October 1997 — continued

|                                     | no. of seats |
|-------------------------------------|--------------|
| <b>Queensland</b>                   |              |
| Legislative Assembly                |              |
| Australian Labor Party              | 44           |
| National Party of Australia         | 29           |
| Liberal Party                       | 15           |
| Independent                         | 1            |
| <b>South Australia</b>              |              |
| House of Assembly                   |              |
| Australian Labor Party              | 21           |
| Liberal Party                       | 23           |
| National Party of Australia         | 1            |
| Independent                         | 2            |
| Legislative Council                 |              |
| Australian Labor Party              | 8            |
| Liberal Party                       | 10           |
| Australian Democrats                | 3            |
| Independent                         | 1            |
| <b>Western Australia</b>            |              |
| Legislative Assembly                |              |
| Australian Labor Party              | 19           |
| Liberal Party                       | 29           |
| National Party of Australia         | 6            |
| Independent                         | 3            |
| Legislative Council                 |              |
| Australian Labor Party              | 12           |
| Liberal Party                       | 14           |
| National Party of Australia         | 3            |
| Australian Democrats                | 2            |
| Independent                         | 1            |
| The Greens                          | 3            |
| <b>Tasmania</b>                     |              |
| House of Assembly                   |              |
| Australian Labor Party              | 14           |
| Liberal Party                       | 16           |
| Tasmanian Greens                    | 4            |
| Independent                         | 1            |
| Legislative Council                 |              |
| Australian Labor Party              | 3            |
| Liberal Party                       | 1            |
| Independent                         | 15           |
| <b>Northern Territory</b>           |              |
| Legislative Assembly                |              |
| Australian Labor Party              | 7            |
| Country Liberal Party               | 18           |
| Independent                         | 0            |
| <b>Australian Capital Territory</b> |              |
| Legislative Assembly                |              |
| Australian Labor Party              | 6            |
| Liberal Party                       | 7            |
| ACT Greens                          | 2            |
| Independent                         | 2            |

Source: Department of the Parliamentary Library.

## Acts of the Parliaments

In the Commonwealth Parliament all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Australian Constitution.

In all States, other than South Australia and Tasmania, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly. In South Australia and Tasmania laws are enacted in the name of the Governor of the State, with the advice and consent of the Parliament in the case of South Australia, and of the Legislative Council and House of Assembly in the case of Tasmania. Generally, assent to bills passed by the Legislatures is given by the Governor-General or State Governor acting on behalf of, and in the name of, the Sovereign. In certain special cases bills are reserved for Royal assent. The Parliaments of the States are empowered generally, subject to the Australian Constitution, to make laws in and for their respective States in all cases. The power of the States to make laws was enhanced in 1986 by the enactment by the Commonwealth Parliament of the *Australia Act 1986* and the accompanying *Australia (Request and Consent) Act 1986*. Subject to certain limitations they may alter, repeal or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth Parliament, the latter law prevails and the former law is, to the extent of the inconsistency, invalid.

## Enactment of legislation by the Commonwealth Parliament

The legislation passed by the Commonwealth Parliament between 1901 and 1973, and which was then still in operation, was published in a consolidated form entitled *Acts of the Parliament 1901–73*. Since 1974, annual volumes of Acts have also been published. The consolidation contains a chronological table of Acts passed from 1901 to 1973, showing how they are affected by subsequent legislation or lapse of time, together with a table of legislation of the Commonwealth Parliament passed between 1901 and 1973 in relation to the several provisions of the Australian Constitution. Reference should be made to these for complete information.

In 1997 the number of enactments of the Commonwealth Parliament was 222.

## National Anthem and colours of Australia

His Excellency, the Governor-General of the Commonwealth of Australia, issued the following Proclamation on 19 April 1984:

I, SIR NINIAN MARTIN STEPHEN,  
Governor-General of the Commonwealth of Australia, acting with the advice of the Federal Executive Council, hereby declare:

(a) that the anthem 'God Save The Queen' shall henceforth be known as the Royal Anthem and be used in the presence of Her Majesty The Queen or a member of the Royal Family;

(b) that the National Anthem shall consist of the tune known as 'Advance Australia Fair' with the following words:

*Australians all let us rejoice,  
For we are young and free,  
We've golden soil and wealth for toil;  
Our home is girt by sea;  
Our land abounds in nature's gifts  
Of beauty rich and rare,  
In history's page, let every stage*

*Advance Australia Fair.  
In joyful strains then let us sing,  
Advance Australia Fair.*

*Beneath our radiant Southern Cross  
We'll toil with hearts and hands;  
To make this Commonwealth of ours  
Renowned of all the lands;  
For those who've come across the seas  
We've boundless plains to share;  
With courage let us all combine  
To Advance Australia Fair.  
In joyful strains then let us sing,  
Advance Australia Fair.*

(c) that the Vice-Regal Salute to be used in the presence of His Excellency The Governor-General shall consist of the first four bars and the last four bars of the tune known as Advance Australia Fair;

(d) that the National Anthem shall be used on all official and ceremonial occasions, other than occasions on which either the Royal Anthem or the Vice-Regal Salute is used; and

(e) that green and gold (Pantone Matching System numbers 116C and 348C as used for printing on paper) shall be the national colours of Australia for use on all occasions on which such colours are customarily used.

## Bibliography

Carter, J., *Parliamentary Government in Australia*, 3rd ed., Parliamentary Education Office, Canberra, 1995.

Australian Electoral Commission, *Commonwealth Electoral Procedures*, AGPS, 1992.

Department of the Parliamentary Library, *Parliamentary Handbook of the Commonwealth of Australia*, AGPS, 1978.







# The Constitution

## **Commonwealth of Australia Constitution Act**

*with alterations of the Constitution made by*

- *Constitution Alteration (Senate Elections) Act 1906*  
(No. 1 of 1907)
- *Constitution Alteration (State Debts) Act 1909*  
(No. 3 of 1910)
- *Constitution Alteration (State Debts) Act 1928*  
(No. 1 of 1929)
- *Constitution Alteration (Social Services) Act 1946*  
(No. 81 of 1946)
- *Constitution Alteration (Aboriginals) Act 1967*  
(No. 55 of 1967)
- *Constitution Alteration (Senate Casual Vacancies) Act 1977*  
(No. 82 of 1977)
- *Constitution Alteration (Retirement of Judges) Act 1977*  
(No. 83 of 1977)
- *Constitution Alteration (Referendums) Act 1977*  
(No. 84 of 1977)

Note: The Constitution is printed here as fully amended by the Constitution Alterations specified above. Sections and paragraphs affected by these amendments are shown in their unamended form, in full, in the Notes commencing on page 85.

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# Commonwealth of Australia Constitution Act

An Act to constitute the Commonwealth of Australia

[9th July 1900]

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established:

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian Colonies and possessions of the Queen:

Be it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

## Short title

1. This Act may be cited as the Commonwealth of Australia Constitution Act.<sup>1</sup>

## Act to extend to the Queen's successors

2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.

## Proclamation of Commonwealth

3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation<sup>2</sup> that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.

## Commencement of Act

4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.

## Operation of the Constitution and laws

5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State; and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.<sup>3</sup>

## Definitions

6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.

"The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called "a State."

“Original States” shall mean such States as are parts of the Commonwealth at its establishment.

**Repeal of Federal Council Act**

7.        The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed<sup>4</sup> as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

**Application of Colonial Boundaries Act**

8.        After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

**Constitution**

9.        The Constitution of the Commonwealth shall be as follows:

**The Constitution<sup>1</sup>**

This Constitution is divided as follows:

|              |   |                                       |
|--------------|---|---------------------------------------|
| Chapter I    | – | <b>The Parliament</b>                 |
| Part I       | – | <b>General</b>                        |
| Part II      | – | <b>The Senate</b>                     |
| Part III     | – | <b>The House of Representatives</b>   |
| Part IV      | – | <b>Both Houses of the Parliament</b>  |
| Part V       | – | <b>Powers of the Parliament</b>       |
| Chapter II   | – | <b>The Executive Government</b>       |
| Chapter III  | – | <b>The Judicature</b>                 |
| Chapter IV   | – | <b>Finance and Trade</b>              |
| Chapter V    | – | <b>The States</b>                     |
| Chapter VI   | – | <b>New States</b>                     |
| Chapter VII  | – | <b>Miscellaneous</b>                  |
| Chapter VIII | – | <b>Alteration of the Constitution</b> |
| The Schedule |   |                                       |



## Chapter I

### The Parliament

#### Part I – General

##### Legislative power

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called “The Parliament”, or “The Parliament of the Commonwealth”.

##### Governor-General

2. A Governor-General appointed by the Queen shall be Her Majesty’s representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen’s pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

##### Salary of Governor-General

3. There shall be payable to the Queen out of the Consolidated Revenue fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of the Governor-General shall not be altered during his continuance in office.

##### Provisions relating to Governor-General

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

##### Sessions of Parliament, prorogation and dissolution

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

##### Summoning Parliament

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

##### First session

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

##### Yearly session of Parliament

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

## Part II - The Senate

### The Senate

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State. The Parliament may make laws increasing or diminishing the number of senators for each State,<sup>5</sup> but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

### Qualification of electors

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

### Method of election of senators

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws<sup>6</sup> prescribing the method of choosing the senators for that State.

### Times and places

The Parliament of a State may make laws<sup>6</sup> for determining the times and places of elections of senators for the State.

### Application of State laws

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

### Failure to choose senators

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

### Issue of writs

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

### Rotation of senators

13.<sup>7</sup> As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of three years, and the places of those of the second class at the expiration of six years, from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made within one year before the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of July following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of July preceding the day of his election.

#### Further provision for rotation

**14.** Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.<sup>8</sup>

#### Casual vacancies

**15.<sup>9</sup>** If the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen, sitting and voting together, or, if there is only one House of that Parliament, that House, shall choose a person to hold the place until the expiration of the term. But if the Parliament of the State is not in session when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days from the beginning of the next session of the Parliament of the State or the expiration of the term, whichever first happens.

Where a vacancy has at any time occurred in the place of a senator chosen by the people of a State and, at the time when he was so chosen, he was publicly recognized by a particular political party as being an endorsed candidate of that party and publicly represented himself to be such a candidate, a person chosen or appointed under this section in consequence of that vacancy, or in consequence of that vacancy and a subsequent vacancy or vacancies, shall, unless there is no member of that party available to be chosen or appointed, be a member of that party.

Where:

- (a) in accordance with the last preceding paragraph, a member of a particular political party is chosen or appointed to hold the place of a senator whose place had become vacant; and
- (b) before taking his seat he ceases to be a member of that party (otherwise than by reason of the party having ceased to exist);

he shall be deemed not to have been so chosen or appointed and the vacancy shall be again notified in accordance with section twenty-one of this Constitution.

The name of any senator chosen or appointed under this section shall be certified by the Governor of the State to the Governor-General.

If the place of a senator chosen by the people of a State at the election of senators last held before the commencement of the *Constitution Alteration (Senate Casual Vacancies) 1977* became vacant before that commencement and, at that commencement, no person chosen by the House or Houses of Parliament of the State, or appointed by the Governor of the State, in consequence of that vacancy, or in consequence of that vacancy and a subsequent vacancy or vacancies, held office, this section applies as if the place of the senator chosen by the people of the State had become vacant after that commencement.

A senator holding office at the commencement of the *Constitution Alteration (Senate Casual Vacancies) 1977*, being a senator appointed by the Governor of a State in consequence of a vacancy that had at any time occurred in the place of a senator chosen by the people of the State, shall be deemed to have been appointed to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State that commenced or commences after he was appointed and further action under this section shall be taken as if the vacancy in the place of the senator chosen by the people of the State had occurred after that commencement.

Subject to the next succeeding paragraph, a senator holding office at the commencement of the *Constitution Alteration (Senate Casual Vacancies) 1977* who was chosen by the House or Houses of Parliament of the State in consequence of a vacancy that had at any time occurred in the place of a senator

chosen by the people of the State shall be deemed to have been chosen to hold office until the expiration of the term of service of the senator elected by the people of the State.

If, at or before the commencement of the *Constitution Alteration (Senate Casual Vacancies)* 1977, a law to alter the Constitution entitled "*Constitution Alteration (Simultaneous Elections)* 1977" came into operation,<sup>10</sup> a senator holding office at the commencement of that law who was chosen by the House or Houses of Parliament of a State in consequence of a vacancy that had at any time occurred in the place of a senator chosen by the people of the State shall be deemed to have been chosen to hold office:

- (a) if the senator elected by the people of the State had a term of service expiring on the thirtieth day of June, One thousand nine hundred and seventy-eight – until the expiration or dissolution of the first House of Representatives to expire or be dissolved after that law came into operation; or
- (b) if the senator elected by the people of the State had a term of service expiring on the thirtieth day of June, One thousand nine hundred and eighty-one – until the expiration or dissolution of the second House of Representatives to expire or be dissolved after that law came into operation or, if there is an earlier dissolution of the Senate, until that dissolution.

### **Qualifications of senator**

**16.** The qualifications of a senator shall be the same as those of a member of the House of Representatives.

### **Election of President**

**17.** The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

### **Absence of President**

**18.** Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

### **Resignation of senator**

**19.** A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

### **Vacancy by absence**

**20.** The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

### **Vacancy to be notified**

**21.** Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

### **Quorum**

**22.** Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

### **Voting in Senate**

**23.** Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

## **Part III – The House of Representatives**

### **Constitution of House of Representatives**

**24.** The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:

- (i) a quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators;
- (ii) the number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota: one more member shall be chosen in the State.

But notwithstanding anything in this section, five members at least shall be chosen in each Original State.

### **Provisions as to races disqualified from voting**

**25.** For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

### **Representatives in first Parliament**

**26.** Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:-

|                           |               |
|---------------------------|---------------|
| New South Wales . . . . . | twenty-three; |
| Victoria . . . . .        | twenty;       |
| Queensland . . . . .      | eight;        |
| South Australia . . . . . | six;          |
| Tasmania . . . . .        | five;         |

Provided that if Western Australia is an Original State, the numbers shall be as follows:

|                             |               |
|-----------------------------|---------------|
| New South Wales . . . . .   | twenty-six;   |
| Victoria . . . . .          | twenty-three; |
| Queensland . . . . .        | nine;         |
| South Australia . . . . .   | seven;        |
| Western Australia . . . . . | five;         |
| Tasmania . . . . .          | five.         |

### **Alteration of number of members**

**27.** Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

### **Duration of House of Representatives**

**28.** Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

**Electoral divisions**

**29.** Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws<sup>11</sup> for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provision, each State shall be one electorate.

**Qualification of electors**

**30.** Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.

**Application of State laws**

**31.** Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

**Writs for general election**

**32.** The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

**Writs for vacancies**

**33.** Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

**Qualifications of members**

**34.** Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows:

- (i) he must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen;
- (ii) he must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.

**Election of Speaker**

**35.** The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

**Absence of Speaker**

**36.** Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

**Resignation of member**

**37.** A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

**Vacancy by absence**

**38.** The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

**Quorum**

**39.** Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

**Voting in House of Representatives**

**40.** Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

**Part IV – Both Houses of the Parliament****Right of electors of States**

**41.** No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

**Oath or affirmation of allegiance**

**42.** Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorised by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

**Member of one House ineligible for other**

**43.** A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

**Disqualification**

**44.** Any person who:

- (i) is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power; or
- (ii) is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer; or
- (iii) is an undischarged bankrupt or insolvent: or
- (iv) holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth; or
- (v) has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons;

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section (iv) does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half pay, or a pension, by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

#### **Vacancy on happening of disqualification**

**45.** If a senator or member of the House of Representatives:

- (i) becomes subject to any of the disabilities mentioned in the last preceding section; or
- (ii) takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors; or
- (iii) directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State;

his place shall thereupon become vacant.

#### **Penalty for sitting when disqualified**

**46.** Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

#### **Disputed elections**

**47.** Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House, shall be determined by the House in which the question arises.

#### **Allowance to members**

**48.** Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.

#### **Privileges etc. of Houses**

**49.** The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

#### **Rules and orders**

**50.** Each House of the Parliament may make rules and orders with respect to:

- (i) the mode in which its powers, privileges, and immunities may be exercised and upheld;
- (ii) the order and conduct of its business and proceedings either separately or jointly with the other House.

### **Part V – Powers of the Parliament**

#### **Legislative powers of the Parliament**

**51.** The Parliament shall, subject to this Constitution, have power<sup>12</sup> to make laws for the peace, order, and good government of the Commonwealth with respect to:

- (i) trade and commerce with other countries, and among the States;



- (ii) taxation; but so as not to discriminate between States or parts of States;
- (iii) bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth;
- (iv) borrowing money on the public credit of the Commonwealth;
- (v) postal, telegraphic, telephonic, and other like services;
- (vi) the naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth;
- (vii) lighthouses, lightships, beacons and buoys;
- (viii) astronomical and meteorological observations;
- (ix) quarantine;
- (x) fisheries in Australian waters beyond territorial limits;
- (xi) census and statistics;
- (xii) currency, coinage, and legal tender;
- (xiii) banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money;
- (xiv) insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned;
- (xv) weights and measures;
- (xvi) bills of exchange and promissory notes;
- (xvii) bankruptcy and insolvency;
- (xviii) copyrights, patents of inventions and designs, and trade marks;
- (xix) naturalization and aliens;
- (xx) foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth;
- (xxi) marriage;
- (xxii) divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants;
- (xxiii) invalid and old-age pensions;
- (xxiiiA)<sup>13</sup> the provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances;
- (xxiv) the service and execution throughout the Commonwealth of the civil and criminal process and the judgements of the courts of the States;

- (xxv) the recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States;
- (xxvi)<sup>14</sup> the people of any race for whom it is deemed necessary to make special laws;
- (xxvii) immigration and emigration;
- (xxviii) the influx of criminals;
- (xxix) external affairs;
- (xxx) the relations of the Commonwealth with the islands of the Pacific;
- (xxxi) the acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws;
- (xxxii) the control of railways with respect to transport for the naval and military purposes of the Commonwealth;
- (xxxiii) the acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State;
- (xxxiv) railway construction and extension in any State with the consent of that State;
- (xxxv) conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State;
- (xxxvi) matters in respect of which this Constitution makes provision until the Parliament otherwise provides;
- (xxxvii) matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States,<sup>15</sup> but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law;
- (xxxviii) the exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia;
- (xxxix) matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth;

### **Exclusive powers of the Parliament**

**52.** The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth with respect to:

- (i) the seat of government of the Commonwealth, and all places acquired by the Commonwealth for public purposes;
- (ii) matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth;
- (iii) other matters declared by this Constitution to be within the exclusive power of the Parliament.

### **Powers of the Houses in respect of legislation**

**53.** Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed law so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

### **Appropriation Bills**

**54.** The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

### **Tax Bill**

**55.** Laws imposing taxation shall deal only with the imposition of taxation, and any provision therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

### **Recommendation of money votes**

**56.** A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

### **Disagreement between the Houses**

**57.** If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by

an absolute majority of the total number of the members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

**Royal assent to Bills**

**58.** When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

**Recommendations by Governor-General**

The Governor-General may return to the house in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

**Disallowance by the Queen**

**59.** The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

**Signification of Queen's pleasure on Bills reserved**

**60.** A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

## Chapter II

# The Executive Government

### Executive power

**61.** The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

### Federal Executive Council

**62.** There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

### Provisions referring to Governor-General

**63.** The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

### Ministers of State

**64.** The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

### Ministers to sit in Parliament

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

### Number of Ministers

**65.** Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.

### Salaries of Ministers

**66.** There shall be payable to the Queen, out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which, until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.

### Appointment of civil servants

**67.** Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

### Command of naval and military forces

**68.** The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

**Transfer of certain departments**

**69.** On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth:

posts, telegraphs, and telephones;  
naval and military defence;  
lighthouses, lightships, beacons, and buoys;  
quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

**Certain powers of Governors to vest in Governor-General**

**70.** In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

## Chapter III

### The Judiciary

#### Judicial power and Courts

**71.** The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.

#### Judges' appointment, tenure and remuneration

**72.<sup>16</sup>** The Justices of the High Court and of the other courts created by the Parliament:

- (i) shall be appointed by the Governor-General in Council;
- (ii) shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity;
- (iii) shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during their continuance in office.

The appointment of a Justice of the High Court shall be for a term expiring upon his attaining the age of seventy years, and a person shall not be appointed as a Justice of the High Court if he has attained that age.

The appointment of a Justice of a court created by the Parliament shall be for a term expiring upon his attaining the age that is, at the time of his appointment, the maximum age for Justices of that court and a person shall not be appointed as a Justice of such a court if he has attained the age that is for the time being the maximum age for Justices of that court.

Subject to this section, the maximum age for Justices of any court created by the Parliament is seventy years.

The Parliament may make a law fixing an age that is less than seventy years as the maximum age for Justices of a court created by the Parliament and may at any time repeal or amend such a law, but any such repeal or amendment does not affect the term of office of a Justice under an appointment made before the repeal or amendment.

A Justice of the High Court or of a court created by the Parliament may resign his office by writing under his hand delivered to the Governor-General.

Nothing in the provisions added to this section by the *Constitution Alteration (Retirement of Judges)* 1977 affects the continuance of a person in office as a Justice of a court under an appointment made before the commencement of those provisions.

A reference in this section to the appointment of a Justice of the High Court or of a court created by the Parliament shall be read as including a reference to the appointment of a person who holds office as a Justice of the High Court or of a court created by the Parliament to another office of Justice of the same court having a different status or designation.

#### Appellate jurisdiction of High Court

**73.** The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences:

- (i) of any Justice or Justices exercising the original jurisdiction of the High Court;

- (ii) of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council;
- (iii) of the Inter-State Commission, but as to questions of law only;

and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

### **Appeal to Queen in Council**

**74.** No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked,<sup>17</sup> but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

### **Original jurisdiction of High Court**

**75.** In all matters:

- (i) arising under any treaty;
- (ii) affecting consuls or other representatives of other countries;
- (iii) in which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party;
- (iv) between States, or between residents of different States, or between a State and a resident of another State;
- (v) in which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth;

the High Court shall have original jurisdiction.

### **Additional original jurisdiction**

**76.** The Parliament may make laws conferring original jurisdiction on the High Court in any matter:

- (i) arising under this Constitution, or involving its interpretation;
- (ii) arising under any laws made by the Parliaments;
- (iii) of Admiralty and maritime jurisdiction;
- (iv) Relating to the same subject-matter claimed under the laws of different States.



**Power to define jurisdiction**

**77.** With respect to any of the matters mentioned in the last two sections the Parliament may make laws:

- (i) defining the jurisdiction of any federal court other than the High Court;
- (ii) defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States;
- (iii) investing any court of a State with federal jurisdiction.

**Proceedings against Commonwealth or State**

**78.** The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

**Number of judges**

**79.** The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

**Trial by jury**

**80.** The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

## **Chapter IV**

### **Finance and Trade**

#### **Consolidated Revenue Fund**

**81.** All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

#### **Expenditure charged thereon**

**82.** The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

#### **Money to be appropriated by law**

**83.** No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

#### **Transfer of officers**

**84.** When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

#### **Transfer of property of State**

**85.** When any department of the public service of a State is transferred to the Commonwealth:

- (i) all property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary;

- (ii) the Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth;
- (iii) the Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament;
- (iv) the Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

**86.** On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

**87.** During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

#### **Uniform duties of customs**

**88.** Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

#### **Payment to States before uniform duties**

**89.** Until the imposition of uniform duties of customs:

- (i) the Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State:
  - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth;
  - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth;
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

#### **Exclusive power over customs, excise, and bounties**

**90.** On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

**Exceptions as to bounties**

**91.** Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

**Trade within the Commonwealth to be free**

**92.** On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

**Payment to States for five years after uniform tariffs**

**93.** During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides:

- (i) the duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State;
- (ii) subject to the last subsection, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

**Distribution of surplus**

**94.** After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

**Customs duties of Western Australia**

**95.** Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an Original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

**Financial assistance to States**

**96.** During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

**Audit**

**97.** Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the

receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

### **Trade and commerce includes navigation and State railways**

**98.** The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

### **Commonwealth not to give preference**

**99.** The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

### **Nor abridge right to use water**

**100.** The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

### **Inter-State Commission**

**101.** There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.

### **Parliament may forbid preferences by State**

**102.** The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

### **Commissioners' appointment, tenure, and remuneration**

**103.** The members of the Inter-State Commission:

- (i) shall be appointed by the Governor-General in Council;
- (ii) shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity;
- (iii) shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.

### **Saving of certain rates**

**104.** Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

### **Taking over public debts of States**

**105.** The Parliament may take over from the States their public debts, or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the States shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.<sup>18</sup>

**Agreements with respect of State debts<sup>19</sup>****105A.**

- (1) The Commonwealth may make agreements with the States with respect to the public debts of the States, including:
  - (a) the taking over of such debts by the Commonwealth;
  - (b) the management of such debts;
  - (c) the payment of interest and the provision and management of sinking funds in respect of such debts;
  - (d) the consolidation, renewal, conversion, and redemption of such debts;
  - (e) the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and
  - (f) the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.
- (2) The Parliament may make laws for validating any such agreement made before the commencement of this section.
- (3) The Parliament may make laws for the carrying out by the parties thereto of any such agreement.
- (4) Any such agreement may be varied or rescinded by the parties thereto.
- (5) Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto notwithstanding anything contained in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.
- (6) The powers conferred by this section shall not be construed as being limited in any way by the provisions of section one hundred and five of this Constitution.

## Chapter V

### The States

#### Saving of Constitution

**106.** The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

#### Saving of power of State Parliaments

**107.** Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

#### Saving of State laws

**108.** Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

#### Inconsistency of laws

**109.** When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

#### Provisions referring to Governor

**110.** The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

#### States may surrender territory

**111.** The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

#### States may levy charges for inspection laws

**112.** After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

#### Intoxicating liquids

**113.** All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

#### States may not raise forces

##### Taxation of property of Commonwealth or State

**114.** A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

**States not to coin money**

**115.** A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

**Commonwealth not to legislate in respect of religion**

**116.** The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

**Rights of residents in States**

**117.** A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

**Recognition of laws etc. of States**

**118.** Full faith and credit shall be given, throughout the Commonwealth to the laws, the public Acts and records, and the judicial proceedings of every State.

**Protection of States from invasion and violence**

**119.** The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

**Custody of offenders against laws of the Commonwealth**

**120.** Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.



## **Chapter VI**

### **New States**

#### **New States may be admitted or established**

**121.** The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

#### **Government of territories**

**122.** The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

#### **Alteration of limits of States**

**123.** The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

#### **Formation of new States**

**124.** A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

## **Chapter VII**

### **Miscellaneous**

#### **Seat of Government**

**125.** The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

#### **Power to Her Majesty to authorise Governor-General to appoint deputies**

**126.** The Queen may authorise the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies<sup>20</sup> within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

**127.**<sup>21</sup>

## Chapter VIII

### Alteration of the Constitution

#### Mode of altering the Constitution

**128.**<sup>22</sup> This Constitution shall not be altered except in the following manner:

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State and Territory to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it, or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State and Territory qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

In this section, "Territory" means any territory referred to in section one hundred and twenty-two of this Constitution in respect of which there is in force a law allowing its representation in the House of Representatives.

## Schedule

### Oath

I, *A.B.*, do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. SO HELP ME GOD!

### Affirmation

I, *A.B.*, do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

*(NOTE – The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.)*

## Notes

1. The Constitution as printed above contains all the alterations of the Constitution made up to 1 January 1997. Particulars of the Acts by which the Constitution was altered are as follows:

| Act                                                               | Number and year | Date of Assent |
|-------------------------------------------------------------------|-----------------|----------------|
| <i>Constitution Alteration (Senate Elections) Act 1906</i>        | 1, 1907         | 3 Apr 1907     |
| <i>Constitution Alteration (State Debts) Act 1909</i>             | 3, 1910         | 6 Aug 1910     |
| <i>Constitution Alteration (State Debts) Act 1928</i>             | 1, 1929         | 13 Feb 1929    |
| <i>Constitution Alteration (Social Services) Act 1946</i>         | 81, 1946        | 19 Dec 1946    |
| <i>Constitution Alteration (Aboriginals) Act 1967</i>             | 55, 1967        | 10 Aug 1967    |
| <i>Constitution Alteration (Senate Casual Vacancies) Act 1977</i> | 82, 1977        | 29 July 1977   |
| <i>Constitution Alteration (Retirement of Judges) Act 1977</i>    | 83, 1977        | 29 July 1977   |
| <i>Constitution Alteration (Referendums) Act 1977</i>             | 84, 1977        | 29 July 1977   |

### Table of Amendments

*ad.* = added or inserted; *am.* = amended; *rep.* = repealed; *rs.* = repealed and substituted

| Provision affected | How affected                   |
|--------------------|--------------------------------|
| s. 13              | am. No. 1, 1907                |
| s. 15              | rs. No. 82, 1977               |
| s. 51              | am. No. 81, 1946; No. 55, 1967 |
| s. 72              | am. No. 83, 1977               |
| s. 105             | am. No. 3, 1910                |
| s. 105A            | ad. No. 1, 1929                |
| s. 127             | rep. No. 55, 1967              |
| s. 128             | am. No. 84, 1977               |

2. Covering Clause 3 – The Proclamation under covering clause 3 was made on 17 September 1900 and is published in *Gazette* 1901, p. 1.
3. Covering Clause 5 – Cf. the *Statute of Westminster Adoption Act 1942*.
4. Covering Clause 7 – The following Acts have repealed Acts passed by the Federal Council of Australasia:

*Defence Act 1903* (No. 20, 1903), s. 6

*Pearl Fisheries Act 1952* (No. 8, 1952), s. 3 (*Pearl Fisheries Act 1952* repealed by *Continental Shelf (Living Natural Resources) Act 1968*, s. 3)

*Service and Execution of Process Act 1901* (No. 11, 1901), s. 2 (s. 2 subsequently repealed by *Service and Execution of Process Act 1963*, s. 3).

5.     Section 7 – The number of senators for each State was increased to 12 by the *Representation Act 1983*, s. 3.
6.     Section 9 — The following State Acts have been passed in pursuance of the powers conferred by s. 9:

| State             | Number             | Short title                                                                                                       | How affected                                                                                   |
|-------------------|--------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| New South Wales   | No. 73, 1900       | <i>Federal Elections Act 1900</i>                                                                                 | Ss. 2, 3, 4, 5 and 6 and the Schedule repealed by No. 9, 1903; wholly repealed by No. 41, 1912 |
|                   | No. 9, 1903        | <i>Senators' Elections Act 1903</i>                                                                               | (Still in force)                                                                               |
| Victoria          | No. 1715           | <i>Federal Elections Act 1900</i>                                                                                 | Repealed by No. 1860                                                                           |
|                   | No. 1860           | <i>Senate Elections (Times and Places) Act 1903</i>                                                               | Repealed by No. 2723                                                                           |
|                   | No. 2399           | <i>Senate Elections (Times and Places) Act 1912</i>                                                               | Repealed by No. 2723                                                                           |
|                   | No. 2723           | <i>Senate Elections (Times and Places) Act 1915</i>                                                               | Repealed by No. 3769                                                                           |
|                   | No. 3769           | <i>Senate Elections (Times and Places) Act 1928</i>                                                               | Repealed by No. 6365                                                                           |
| Queensland        | No. 6365           | <i>Senate Elections Act 1958</i>                                                                                  | (Still in force)                                                                               |
|                   |                    | <i>The Parliament of the Commonwealth Elections Act and The Elections Acts 1885 to 1898 Amendment Act of 1900</i> | Operation exhausted                                                                            |
|                   | 64 Vic. No. 25     |                                                                                                                   |                                                                                                |
|                   | 3 Edw. VII. No. 6  | <i>The Election of Senators Act of 1903</i>                                                                       | Repealed by 9 Eliz. II. No. 20                                                                 |
| South Australia   | 9 Eliz. II. No. 20 | <i>The Senate Elections Act of 1960</i>                                                                           | (Still in force)                                                                               |
|                   |                    | <i>The Election of Senators Act 1903</i>                                                                          | (Still in force)                                                                               |
|                   | No. 834            |                                                                                                                   |                                                                                                |
| Western Australia | No. 11, 1903       | <i>Election of Senators Act 1903</i>                                                                              | (Still in force)                                                                               |
| Tasmania          | 64 Vic. No. 59     | <i>The Federal Elections Act 1900</i>                                                                             | Repealed by 26 Geo. V. No. 3                                                                   |
|                   | 3 Edw. VII. No. 5  | <i>The Election of Senators Act 1903</i>                                                                          | Repealed by 26 Geo. V. No. 3                                                                   |
|                   | 26 Geo. V. No. 3   | <i>Senate Elections Act 1935</i>                                                                                  | (Still in force)                                                                               |

7.     Section 13 was amended by the *Constitution Alteration (Senate Elections) Act 1906*, and previously read as follows:

“13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of the third year, and the places of those of the second class at the expiration of the sixth year, from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made in the year at the expiration of which the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of January following the day of his election, except in the case of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of January preceding the day of his election.”

8. Section 14 – For the provisions applicable upon the increase in the number of senators to 12 made by the *Representation Act 1983*, see section 3 of that Act.
9. Section 15 was amended by the *Constitution Alteration (Senate Casual Vacancies) Act 1977*, and previously read as follows:

“15. if the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.”

10. Section 15 – The proposed law to alter the Constitution entitled “*Constitution Alteration (Simultaneous Elections) Act 1977*” was submitted to the electors in each State of the Commonwealth on 21 May 1977: it was not approved by a majority of all the electors voting in a majority of the States. See *Gazette 1977*, No. S100, p. 1.
11. Section 29 – The following State Acts were passed in pursuance of the powers conferred by s. 29, but ceased to be in force upon the enactment of the *Commonwealth Electoral Act 1902*:

| State             | Number         | Short title                                                                                                       |
|-------------------|----------------|-------------------------------------------------------------------------------------------------------------------|
| New South Wales   | No. 73, 1900   | <i>Federal Elections Act 1900</i>                                                                                 |
| Victoria          | No. 1667       | <i>Federal House of Representatives Victorian Electorates Act 1900</i>                                            |
| Queensland        | 64 Vic. No. 25 | <i>The Parliament of the Commonwealth Elections Act and The Elections Acts 1885 to 1898 Amendment Act of 1900</i> |
| Western Australia | 64 Vic. No. 6  | <i>Federal House of Representatives Western Australian Electorates Act 1900</i>                                   |

12. Section 51 – The following Imperial Acts extended the legislative powers of the Parliament:  
*Whaling Industry (Regulations) Act 1934*, s. 15  
*Geneva Convention Act 1937*, s. 2  
*Emergency Powers (Defence) Act 1939*, s. 5  
*Army and Air Force (Annual) Act 1940*, s. 3.
13. Section 51 (xxiiiA) – This section was inserted by the *Constitution Alteration (Social Services) Act 1946*.

14. Section 51 (xxvi) was amended by the *Constitution Alteration (Aboriginals) Act 1967*, and previously read as follows:

“(xxvi) the people of any race, other than the aboriginal race in any State, for whom it is deemed necessary to make special laws;”

15. Section 51 (xxxvii) – The following Acts have been passed by the Parliaments of the States to refer matters to the Parliament under section 51 (xxxvii):

| State           | Number            | Short title                                                 | How affected                                                          |
|-----------------|-------------------|-------------------------------------------------------------|-----------------------------------------------------------------------|
| New South Wales | No. 65, 1915      | <i>Commonwealth Powers (War) Act 1915</i>                   | Expired 9 Jan 1921; see s. 5                                          |
|                 | No. 33, 1942      | <i>Commonwealth Powers Act 1942</i>                         | Expired; see s. 4                                                     |
|                 | No. 18, 1943      | <i>Commonwealth Powers Act 1943</i>                         | Expired; see s. 4                                                     |
|                 | No. 48, 1983      | <i>Commonwealth Powers (Meat Inspection) Act 1983</i>       | (Still in force)                                                      |
|                 | No. 182, 1986     | <i>Commonwealth Powers (Family Law – Children) Act 1986</i> | (Still in force)                                                      |
|                 | No. 61, 1992      | <i>Mutual Recognition (New South Wales) Act 1992</i>        | (Still in force)                                                      |
|                 | No. 104, 1992     | <i>Commonwealth Powers (State Banking) Act 1992</i>         | (Still in force)                                                      |
|                 | No. 100, 1993     | <i>Commonwealth Powers (Poultry Processing) Act 1993</i>    | (Still in force)                                                      |
| Victoria        | No. 3108          | <i>Commonwealth Powers (Air Navigation) Act 1920</i>        | Repealed by No. 4502                                                  |
|                 | No. 3658          | <i>Commonwealth Arrangements Act 1928 (Part III)</i>        | Repealed by No. 4502                                                  |
|                 | No. 4009          | <i>Debt Conversion Agreement Act 1931 (No. 2)</i>           | (Still in force)                                                      |
|                 | No. 4950          | <i>Commonwealth Powers Act 1943</i>                         | Not proclaimed to come into operation and cannot now be so proclaimed |
|                 | No. 92, 1986      | <i>Commonwealth Powers (Family Law – Children) Act 1986</i> | (Still in force)                                                      |
|                 | No. 2, 1993       | <i>Mutual Recognition (Victoria) Act 1993</i>               | (Still in force)                                                      |
| Queensland      | 12 Geo. V. No. 30 | <i>The Commonwealth Powers (Air Navigation) Act 1921</i>    | Repealed by 1 Geo. VI. No. 8                                          |
|                 | 22 Geo. V. No. 30 | <i>The Commonwealth Legislative Power Act 1931</i>          | Repealed by No. 46, 1983                                              |
|                 | 7 Geo. VI. No. 19 | <i>Commonwealth Powers Act 1943</i>                         | Expired; see s. 4                                                     |
|                 | 14 Geo. VI. No. 2 | <i>The Commonwealth Powers (Air Transport) Act 1950</i>     | (Still in force)                                                      |
|                 | No. 37, 1990      | <i>Commonwealth Powers (Family Law – Children) Act 1990</i> | (Still in force)                                                      |
|                 | No. 67, 1992      | <i>Mutual Recognition (Queensland) Act 1992</i>             | (Still in force)                                                      |



| State                    | Number            | Short title                                                                | How affected                  |
|--------------------------|-------------------|----------------------------------------------------------------------------|-------------------------------|
| <i>(continued)</i>       |                   |                                                                            |                               |
| <b>South Australia</b>   | No. 1469, 1921    | <i>Commonwealth Powers (Air Navigation) Act 1921</i>                       | Repealed by No. 2352, 1937    |
|                          | No. 2061, 1931    | <i>Commonwealth Legislative Power Act 1931</i>                             | <i>(Still in force)</i>       |
|                          | No. 3, 1943       | <i>Commonwealth Powers Act 1943</i>                                        | Expired; see s. 5             |
|                          | No. 89, 1986      | <i>Commonwealth Powers (Family Law) Act 1986</i>                           | <i>(Still in force)</i>       |
|                          | No. 72, 1993      | <i>Mutual Recognition (South Australia) Act 1993</i>                       | <i>(Still in force)</i>       |
| <b>Western Australia</b> | No. 4, 1943       | <i>Commonwealth Powers Act 1943</i>                                        | Repealed by No. 58, 1965      |
|                          | No. 57, 1945      | <i>Commonwealth Powers Act 1945</i>                                        | Repealed by No. 58, 1965      |
|                          | No. 30, 1947      | <i>Commonwealth Powers Act 1943, Amendment Act 1947</i>                    | Repealed by No. 58, 1965      |
|                          | No. 31, 1947      | <i>Commonwealth Powers Act 1945, Amendment Act 1947</i>                    | Repealed by No. 58, 1965      |
|                          | No. 73, 1947      | <i>Commonwealth Powers Act 1945, Amendment Act (No. 2) 1947</i>            | Repealed by No. 58, 1965      |
|                          | No. 81, 1947      | <i>Commonwealth Powers Act 1945-1947, Amendment (Continuance) Act 1947</i> | Repealed by No. 58, 1965      |
|                          | No. 53, 1995      | <i>Mutual Recognition (Western Australia) Act 1995</i>                     | <i>(Still in force)</i>       |
| <b>Tasmania</b>          | 11 Geo. V. No. 42 | <i>Commonwealth Powers (Air Navigation) Act 1920</i>                       | Repealed by 1 Geo. VI. No. 14 |
|                          | No. 46, 1952      | <i>Commonwealth Powers (Air Transport) Act 1952</i>                        | <i>(Still in force)</i>       |
|                          | No. 62, 1966      | <i>Commonwealth Powers (Trade Practices) Act 1966</i>                      | Expired; see s. 2             |
|                          | No. 5, 1987       | <i>Commonwealth Powers (Family Law) Act 1987</i>                           | <i>(Still in force)</i>       |
|                          | No. 33, 1993      | <i>Mutual Recognition (Tasmania) Act 1993</i>                              | <i>(Still in force)</i>       |
|                          | No. 20, 1994      | <i>Commonwealth Powers (Family Law) Amendment Act 1994</i>                 | <i>(Still in force)</i>       |

16. Section 72 was amended by the *Constitution Alteration (Retirement of Judges) Act 1977*, and previously read as follows:

“72. The Justices of the High Court and of the other courts created by the Parliament:

- (i) shall be appointed by the Governor-General in Council;
- (ii) shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity;

- (iii) shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during their continuance in office.”

17. Section 74 – See *Privy Council (Limitation of Appeals) Act 1968*, *Privy Council (Appeals from the High Court) Act 1975* and *Kirmani v Captain Cook Cruises Pty Ltd (No. 2)*; *Ex parte Attorney-General (QLD)* (1985) 159 CLR 451.

18. Section 105 was amended by the *Constitution Alteration (State Debts) Act 1909*, and previously read as follows:

“**105.** The Parliament may take over from the States their public debts as existing at the establishment of the Commonwealth, or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the States shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.”

19. Section 105A – This section was inserted by the *Constitution Alteration (State Debts) Act 1928*.

20. Section 126 – See clause IV of the Letters Patent relating to the Office of Governor-General, published in *Gazette* 1984, S334, pp. 3 and 4.

21. Section 127 (titled “Aborigines not to be counted in reckoning population”) was repealed by the *Constitution Alteration (Aboriginals) Act 1967*, and previously read as follows:

“**127.** In reckoning the numbers of people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.”

22. Section 128 was amended by the *Constitution Alteration (Referendums) Act 1977*, and previously read as follows:

“**128.** This Constitution shall not be altered except in the following manner:

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it, or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen’s assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.”

## A

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# 3

# International relations

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## Introduction

International relations are increasingly important for Australia. This reflects the international and domestic changes that have linked Australia even more closely to other countries. It also reflects the broader scope of international relations: many of the issues and policies that were previously domestic now have significant international dimensions. Therefore Australia's international relations, while still dominated by policy issues related to foreign affairs, trade and security, increasingly include issues related to sectors such as education, tourism, transport and communications.

Australia's international relations are driven by its core national interests — the security of the Australian nation and the jobs and standard of living of the Australian people. Among the important elements of Australia's international relations are the priority accorded to the Asia Pacific, and especially to the countries of East Asia, the forging of close relationships with the United States, Japan, Indonesia and China, the commitment to further trade liberalisation, and strong support for the World Trade Organization (WTO) and Asia Pacific Economic Cooperation (APEC).

Australia has global interests which require broad international engagement. The priority Australia attaches to its relationships with the countries of the Asia Pacific does not diminish the important interests Australia must pursue in the Americas, Europe and elsewhere.

Australia's international relations are promoted through maintaining and developing strong bilateral relationships and in regional or multilateral institutions and forums.

The two most profound influences on Australian foreign and trade policy over the next fifteen years will be globalisation, and the continuing rise of East Asia and the consequent changing relativities of power and influence.

Globalisation offers opportunities for internationally competitive economies, but also brings challenges for political and economic management. It has profound implications for trade and economic policy. It blurs the division between foreign and domestic policy, increases competitive pressures in markets, and makes globally based trade rules and disciplines even more important.

Despite current difficulties, economic growth in industrialising East Asia is likely to be strong over the next fifteen years. This means that the countries of East Asia will become even more important to Australia as trade and investment partners and in security terms.

China's economic growth, with attendant confidence and enhanced influence, will be the most important strategic development of the next century. How China manages its economic growth and pursues its international objectives, and how other nations, particularly the United States and Japan, respond to China, will be important issues over this period.

The United States will remain, for the foreseeable future, the single most powerful country in the world, with the largest economy and the most advanced technology. The United States is likely to maintain its strategic engagement in East Asia, where it has vital security and economic interests. The relationships among the United States, Japan and China will be key determinants of regional stability. The growth in economic and political influence of others in East Asia, notably the Republic of Korea and Indonesia, is also likely to affect the dynamics of regional security.

## Security interests

The area where Australia's security interests are engaged is extensive. As a continent surrounded by three oceans, this area embraces South East Asia, the South West Pacific, Antarctica, and the eastern Indian Ocean. It also includes North East Asia, because the security of South East Asia cannot be separated from the rest of East Asia and because of the direct consequences of instability in North East Asia for Australia's wellbeing. Any threat to the security of East Asia — from tensions to the extreme of war — would have immediate and adverse effects on Australia. The points of interconnection between the security and economic dynamics of the region are growing, as is the web of interrelated security interests in the Asia Pacific. This is the basis for the high priority Australia places on an active role in efforts to ensure regional security.

The key components of Australia's security strategy are maintaining a strong national defence capability, the security alliance with the United States, developing bilateral defence and security relationships with countries throughout the Asia Pacific, and strengthening multilateral security links in the region, especially the Association of South East Asian Nations (ASEAN) Regional Forum (ARF). Promoting sustainable economic growth in the region is also crucial to regional stability.

Regular bilateral security dialogues with countries in East Asia are an important element in Australia's security strategies. These consultations provide an opportunity to share views on a wide range of regional security issues. They complement multilateral mechanisms dealing with regional security issues, promote transparency and reinforce Australia's commitment to working cooperatively with regional countries on security issues. Australia is expanding the number of countries with which it has such dialogues as part of its long-term strategy of promoting shared security perceptions in the Asia Pacific region.

The ARF is an important step towards creating a sense of strategic community in a region where there is little history of inclusive multilateral approaches to security or defence. It also has an important role in encouraging regional support for international regimes against the proliferation of weapons of mass destruction and their missile delivery systems.

Australia is working in the ARF to develop norms of regional behaviour aimed at avoiding conflict and settling disputes without resort to the threat or use of force. Australia is also encouraging the ARF to take a more central role in discussing and managing issues that threaten stability or confidence, and is taking an active role in expanding the ARF's confidence-building agenda.

While Australia's strategic environment is shaped mostly by developments in the Asia Pacific region, global issues can also have significant security implications for Australia. The risk of global conflict has diminished considerably with the end of the Cold War, but other potential threats remain. Developments in Europe and the Middle East still have the potential to disrupt global security. Similarly, serious instability in other parts of Asia, such as South Asia or Central Asia, would have implications for the security of the Asia Pacific.

Australia has made a major contribution to the significant progress in establishing international regimes to prevent the proliferation of nuclear, chemical and biological weapons and of missiles, and to prohibit nuclear testing. Australia's future efforts will be concentrated on ensuring that these regimes are implemented and remain effective and, where necessary, are strengthened. Australia will continue to be active in efforts to strengthen international regimes banning the use, stockpiling and transfer of anti-personnel landmines. It will also continue to support practical measures such as landmine clearance programs, assistance to victims and improved demining technology to tackle the humanitarian disaster caused by landmines.

## Economic interests

The economic wellbeing of Australia — the jobs and standard of living of individual Australians, and the social cohesion they engender — is fundamental to Australia's international relations.

As with Australia's security interests, Australia's economic interests are most closely engaged in the Asia Pacific region. In 1996–97, 57% of Australia's merchandise exports went to East Asian countries and 75% to APEC members, which are also the destination of over half of Australia's foreign direct investment. In both security and economic terms, there is no region where more significant Australian interests are engaged. This will not change over the medium to long term. Indeed, as the industrialising economies of East Asia grow, the primacy of the Asia Pacific in Australia's international interests will become even more evident.

Australia's economic wellbeing depends on domestic and international factors, especially the competitiveness and flexibility of the Australian economy, and the strength of international markets and their openness to our exports and investment. Domestic economic policies and business actions will have the greatest impact on Australia's competitiveness and productivity. However, as Australia becomes more integrated into the world economy, trade and investment, which already account for a significant share of gross domestic product, will contribute more to Australia's overall economic wellbeing.

Australia's trade strategies focus on reducing barriers to Australian goods, services and investment in foreign markets, developing those markets and promoting Australia as a supplier of goods, services and investment. Bilateral, regional and multilateral means are all necessary to improve access to foreign markets and to facilitate trade. The preeminent regional and multilateral forums are APEC and the WTO. Other practical steps, such as closer links between Closer Economic Relations (Australia's economic relations agreement with New Zealand) and the ASEAN Free Trade Area, are also being pursued.

Australia's bilateral trade and investment strategies are tailored to specific markets — different markets need different levels of government support for Australian exporters and investors. The strategies are coordinated through the high-level bilateral Market Development Task Force. Globalisation will add new elements to these strategies.

The increasing Asia Pacific orientation of Australia's trade and the importance of liberalising and facilitating trade in the region help to make APEC the most significant regional forum in which Australia participates. Australia and the other participating economies committed themselves, in the Declaration by Leaders in Bogor in 1994, to free and open trade and investment by 2010 for industrialised economies and 2020 for developing economies. Australia remains committed to this goal which, if met, would bring considerable long-term benefits for Australia and the region.

Australia is working in the short and medium term to ensure substantial progress in the liberalisation programs of individual APEC economies, including improving Individual Action Plans (for meeting the goal of the Bogor Declaration) on an annual basis, eliminating trade barriers and market distortions in the energy sector, and removing administrative and regulatory impediments to trade and investment in services. Progress in APEC's economic and technical cooperation agenda covering regional transport links, telecommunications and human resources development, will benefit Australian business.

APEC's contribution, however, goes beyond trade and investment issues. It is among the strongest forces for further regional integration and so promotes strategic stability. It promotes cooperative approaches among the major powers of the Asia Pacific. It is the only forum which brings together leaders from across the

Asia Pacific. These meetings contribute to habits of consultation and dialogue, and the development of personal relationships, which are necessary to the strengthening of trust and confidence among regional countries.

Significant as the Asia Pacific is for Australian businesses, Australia's trading interests extend more broadly and so do its trade policy and trade development activities. The WTO is important to Australia because it is the major forum for global trade liberalisation and, through its rules and disciplines, provides a predictable and more transparent environment for business, and a means for resolving disputes. Australia is, and will continue to be, an active player, including as an advocate for continued global liberalisation and open regionalism, and as the leader of the Cairns Group of agricultural fair traders.

Over the short term, Australia is working towards the successful and unambiguous implementation by all participants of all Uruguay Round liberalisation commitments, including new negotiations on agriculture and services; further comprehensive multilateral liberalisation efforts, focusing especially on remaining tariff peaks in the Asia Pacific; and the inclusion of all major trading countries as members of the WTO.

Over the medium to long term, Australia's objectives are launching and successfully concluding a further global round of multilateral trade negotiations; ensuring that the system remains relevant to the changing needs of Australian business by extending the rules and disciplines to new areas of importance; and ensuring that liberalisation under the WTO at least matches the level achieved in regional trading arrangements in its depth and breadth of coverage. Another long-term strategic objective is to make world trade in agriculture free from distortion by subsidies, and to increase access for Australia's exports of agricultural products, given the continuing importance of the sector.

## National values

The values which Australia brings to its international relations are the values of a liberal democracy. These have been shaped by national experience and given vigour through cultural diversity, but reflect a predominantly Western intellectual and cultural heritage. They include the rule of law, freedom of the press, the accountability of the government to an elected parliament, and a commitment to a 'fair go'.

Australia's values strengthen its international relations. They enable Australia both to sustain traditional links to Europe and North America and to forge stronger ones with Asia.

Central to the values to which Australia gives expression is an unqualified commitment to racial equality and to eliminating racial discrimination. This is a non-negotiable tenet of Australia's national cohesion, reflected in the country's ethnic diversity, and is a guiding principle of its international behaviour.

Human rights are an inseparable part of Australia's approach to international relations, both because the treatment of human beings is a matter of concern to Australians and because promoting and protecting human rights underpins Australia's broader security and economic interests.

The objective of Australia's human rights policy is to make a difference on human rights. In promoting human rights, priority is given to practical efforts that can directly improve the human rights situation on the ground. These include development cooperation programs, assisting in establishing national human rights machinery, encouraging bilateral, regional and multilateral discussion of human rights issues, and working to develop and strengthen the effectiveness of regional and international human rights institutions and instruments.

## Australia's assets

In its international relations Australia uses its assets — economic, strategic and cultural — as well as an international reputation as a responsible, constructive and practical country. Australia's history shows that, on issues of importance to it, Australia can exert considerable influence if it sets out to do so.

Australia is a significant economy, bigger in absolute size than all those in the Asia Pacific region except the United States, Canada, Japan, the Republic of Korea and China. It is among the world's most important commodity exporters, and a crucial supplier of industrial raw materials, energy and food.

Australia has a strong skills base, high-quality education and training institutions, advanced physical infrastructure, and adoption and usage rates for information technology which are among the highest in the world. Australia has strong civil institutions which underpin a free

society and encourage free enterprise. Australia's cultural diversity gives Australian society a vigour and capacity to adapt rapidly to new opportunities. It is also a rich source of language and other skills which are a significant advantage in doing business in a global economy.

Australia's defence capability is significant in regional terms. Australia has a broadly based alliance relationship with the United States whose strategic engagement and commitment underwrite the stability of East Asia. Australia shares a close and expanding partnership with Japan, which is the most powerful economy in East Asia, and with Indonesia, the largest country in South East Asia.

This is not to suggest that Australia can afford to be complacent about its future. Over the coming years, Australia will face a much more competitive trading and investment environment, a changing strategic environment, increased competition in East Asian and other markets, continuing international resistance to further trade liberalisation, and internal uncertainties in some key regional countries.

## Australia's bilateral relationships

As a nation with global interests, Australia deals with countries in many regions. Each relationship engages Australian interests in different ways. Each is significant, and Australia does not seek to ascribe a strict hierarchy of importance to them.

This is not to suggest that the interests Australia pursues with each country are equally important, or that Australia devotes equal resources to each of them. The countries which most substantially engage Australia's interests are those which are influential in their own right in shaping Australia's strategic environment, as well as being significant trading and investment partners. Foremost among these are the three major powers and largest economies of the Asia Pacific region — the United States, Japan and China — and Australia's largest neighbour, Indonesia. Significant Australian interests are also engaged in Australia's relationships with the Republic of Korea, the other ASEAN states and, in the South Pacific, New Zealand and Papua New Guinea.

## United States

Australia's alliance relationship with the United States is an asset both redefined and strengthened by the end of the Cold War. It is a central component of Australia's defence and continues to provide Australia with beneficial access to technology, military equipment and intelligence. The alliance would seriously complicate the planning of any potential adversary. The Australia–United States relationship complements and reinforces Australia's policy of close engagement with East Asia. Beyond its significance to the defence of Australia, the alliance strengthens the strategic engagement of the United States in the region, an engagement which has underwritten the regional stability on which the East Asian economic miracle has been built.

The United States is also the largest export market and largest source of investment funds for many East Asian countries, giving it a major role in underpinning future economic growth in the region and making the United States an indispensable participant in the security and economic affairs of the Asia Pacific. United States trade policy is an important factor in determining the effectiveness of its leadership in the Asia Pacific and globally. The United States remains a critical force for regional and global trade liberalisation. It is a key economic partner for Australia, particularly in relation to investment.

## Japan

Australia and Japan enjoy a significant and wide-ranging relationship, with shared interests which extend well beyond a bilateral economic relationship which is by far Australia's most substantial and successful. Japan is Australia's largest export market by a considerable margin — the value of exports to Japan is more than double the value of those to the next largest market. There are strong prospects for expansion in the areas of energy and food. In addition, Japan's large and affluent market presents widening opportunities for Australia as it opens to imports and diversifies. Japan is also an important source of imports and investment.

Australia's partnership with Japan reflects the broad alignment of Australian and Japanese strategic, political and economic interests in the Asia Pacific region, in a Partnership Agenda finalised at the 1997 Australia–Japan Ministerial Committee meeting. Australia and Japan both support the long-term strategic engagement of

the United States in the Western Pacific and recognise the fundamental contribution that it makes to regional stability. Australia and Japan also share a core interest in advancing APEC as the primary vehicle for economic cooperation in the Asia Pacific region. Japan supports Australia's closer association with East Asia. The relationship with Japan has a decisive bearing on Australia's overall standing in East Asia and our degree of participation in regional affairs.

## Indonesia

Australia's relations with Indonesia are fundamentally important. This reflects Indonesia's strategic location astride Australia's northern approaches through which 60% of Australia's exports pass, its size — Indonesia is by far the largest and most populous country in Australia's immediate vicinity — and its long-term leadership role in South East Asia and growing influence more broadly.

In recent years bilateral relations have extended to encompass a wide range of technical, economic, cultural, defence and educational fields. This is in addition to pursuing shared interests in regional organisations such as APEC and the ARF and the growing trade and investment links. Important government initiatives have been the historic bilateral Agreement on Maintaining Security (signed in 1995) and the agreement on the Australia–Indonesia Development Area, signed in 1997, with its focus on shared interest in developing the provinces of the eastern part of Indonesia. The rapid growth in people-to-people contacts in areas such as education and tourism has expanded links between the two societies.

Economic links with Indonesia are growing. Australia's offer of a US\$1 billion standby facility with the IMF as Indonesia seeks to address structural difficulties underlines the importance to Australia of a strong and vigorous Indonesian economy.

## China

By early next century, China is likely to be among the three or four largest economies in the world, as well as being integrated into the international economy through multilateral and regional mechanisms such as the WTO and APEC. Australia supports China's accession to the WTO on appropriate terms.

As China's economic stature continues to grow so too does its impact on the security and politics of the region and the world. Its



relationships with the United States and Japan are particularly critical to stability in the Asia Pacific.

China is one of Australia's key partners, and one with which we have a growing trade and investment relationship. Australia's approach to China is based on shared interests and mutual respect. These principles provide the basis for a realistic framework for the conduct of the relationship, and offer the best prospects to maximise shared economic interests, advance Australia's political and strategic interests, and manage differences in a sensible and practical way. The one-China policy is a fundamental element of the bilateral relationship. Australia has an important economic and trade relationship with Taiwan which will be pursued within the framework of the one-China policy.

### **The Americas**

In the Americas, the close historical and cultural ties Australia has with Canada are the basis for an active trade and investment relationship, and close cooperation on international issues. Mexico has the potential to become a more important economic partner, as its growth continues, although, as with Canada, Australia is working to overcome any long-term diversionary effects of the North American Free Trade Agreement. Australia is expanding its relationships with an economically stronger South America. Regional economic integration in South America is reinforcing liberalisation and creating opportunities, but could also raise problems for Australia through the trade diversionary impact of preferential trade agreements.

### **East Asia**

Australia's bilateral relationship with the Republic of Korea is growing; it is Australia's second-largest export market and fourth-largest trading partner, and the scope of dialogue and cooperation is expanding. The Republic of Korea is likely to become more influential in the economic and security affairs of the region and internationally. In the medium term, it is likely to cement its place among the world's ten largest economies. Australia has a strong interest in the continuing growth of the Korean economy and strongly supports Korea's domestic reform and trade liberalisation initiatives, especially in the aftermath of recent financial market instability. Although this will lead to some slowing of growth, the long-term economic potential of Korea remains strong.

ASEAN has contributed enormously to the growth and influence of South East Asia, and it is likely to continue to play a key role in the emerging regional order. Australia's relations with ASEAN as a grouping, and with its member states (Brunei Darussalam, Burma, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Viet Nam), are central to Australia's engagement with the region. As well as the growing significance of trade and investment, a wide range of technical, economic, cultural, defence and educational fields have become important components of the bilateral relationships. At the same time, people-to-people links have expanded greatly — in part as a consequence of the growth in tourism in both directions and in the numbers of Australians living and working in South East Asia and of South East Asians living, working and studying here.

### **Europe**

Australia's relations with an increasingly integrated Europe, politically and economically, continue to be important. European countries remain Australia's major sources of and destinations for investment as well as significant trading partners. As well, Europe continues to be a major global centre of economic activity and a significant player in some of the world's key economic forums, including the Group of Seven and the WTO. The security of the European region is crucial in global strategic terms — a judgement reflected in the continuing relevance of North Atlantic Treaty Organisation (NATO). The importance of Europe is reflected in the breadth and depth of Australia's relations with its major countries — especially the United Kingdom, France, Germany, Italy and Russia — and with the European Union (EU). This is reflected in the Joint Declaration recently signed by Australia and the EU.

### **The Indian Ocean region**

India is assuming a growing strategic and economic importance in global and regional affairs. Important steps have been taken to expand Australia's trade, investment and political links with India, including the Year of South Asia initiative to promote awareness of the region.

More broadly, the Indian Ocean region is assuming greater importance to Australia as the process of regional economic cooperation and development gathers pace. Australia's membership of the Indian Ocean Rim Association for Regional Cooperation provides it



with an opportunity to benefit from and influence this process. The Gulf states, South Africa and countries of South Asia are growing markets for Australia.

### The Middle East and Africa

In the Middle East, Australia has significant commercial interests and substantial prospects of increasing trade and investment links. In addition, political and strategic developments in this region affect Australia's trade interests and engage its political concerns. Australia is building on its traditional commodity exports, while broadening the base of its trade into services (especially education and medicine) and manufactures. Australia's most significant relationship in Africa is with South Africa. This is a growing market for Australia's commercial interests, and provides a base for trading into all the countries of the Southern African Development Community.

### The South Pacific

The South Pacific is an area of significant strategic interest for Australia, and Australia's relations with countries in the region are of abiding importance.

A shared background and experience and a multi-faceted relationship incline Australia naturally towards a unique partnership with New Zealand. New Zealand is an ally and Australia's third-largest export market, the first in importance for exports of elaborately transformed manufactures. The successful pursuit of many Australian international interests are advanced by maintaining a mutually supportive relationship with a New Zealand which is economically strong, bilaterally and internationally engaged, and capable of playing a credible role in regional security.

Australia has a longstanding close relationship with Papua New Guinea (PNG). PNG's location gives it an enduring strategic importance to Australia. Pursuing a constructive and productive bilateral relationship is a high priority for Australia. Australia is a major supplier to and investor in PNG, although increasing competition may reduce over time Australia's overall market share of PNG's imports. Australia supports a process of sustainable economic development in PNG, aimed at enhanced self-reliance within the context of a functional and democratic state. Australia gives strong backing to PNG's continuing commitment to fiscal prudence, stable macroeconomic policies,

structural adjustment, trade liberalisation and market reforms.

Australia's relations with the other states of the Pacific islands region are important. As part of the neighbourhood, these states have close historical, political, economic, aid, and community ties with Australia. Australia's international standing, especially in East Asia and in North America and Europe, is influenced by perceptions of how well Australia fulfils a leadership role in the islands region. Australia plays a significant role in trade and investment in the South Pacific, with scope for increased involvement as the economies of the larger island countries develop. Australia supports regional trade liberalisation and facilitation.

### The United Nations (UN) system

In addition to its multilateral activities in forums such as the WTO and Organisation for Economic Cooperation and Development (OECD), Australia pursues important interests in the bodies that comprise the UN system. These interests are engaged in the specialised agencies such as the Food and Agricultural Organization and affiliated organisations such as the International Atomic Energy Agency, as well as in the principal organs (the Security Council and the General Assembly).

The UN is important to Australia in the core areas of international security and disarmament, environment, human rights machinery, targeted development programs, and those technical agencies dealing with issues such as agriculture, refugees and international nuclear safeguards. Australia has been playing and continues to play an active role in these and other areas such as health, meteorology and food aid. In particular, Australia has been catalytic in securing international adoption of arms control treaties such as the Comprehensive Test Ban Treaty which helped to remove the threat of global nuclear proliferation.

Australia is also active in international environment negotiations, which are a growing area of international activity. The emphasis here is on working towards international action which contributes to sustainable development, while protecting Australia's national interests. The importance of doing so is highlighted by the different interests of other countries, including many which are partners on other issues.

An ongoing priority for Australia is reform of the UN so that it can fulfil its responsibilities properly. Likely pressure points will be the environment, security, peacekeeping, and the effective management of the organisation to meet growing demands with static or declining real resources. One element of reform is improved administrative efficiency and effectiveness — the UN must undergo the same fiscal discipline and adjustment to which many governments have already been subject. Another element is the need to re-examine the current group system within the UN so that it better reflects the interests of all the members of the UN.

## **Role of the Department of Foreign Affairs and Trade in Australia's international relations**

The Department of Foreign Affairs and Trade (DFAT) is the principal source of advice to the Government on foreign and trade policy issues and is the agency primarily responsible for implementing the Government's foreign and trade policies. Its aim is 'to advance the interests of Australia and Australians internationally'.

Its goals are to:

- enhance Australia's security;
- promote Australia's economic growth, jobs and standard of living;
- help Australian travellers and Australians overseas;
- strengthen global cooperation in ways which advance Australia's interests;
- promote public understanding of Australia's foreign and trade policy; and
- provide clients with highly professional, efficient and effective services.

## **Consular and passport services**

Consular and passport services are important areas of work for DFAT. In 1996–97, the Department provided some 13,000 Australians with consular assistance overseas and in Australia, and issued 900,500 travel documents. Australia is a world leader in providing secure passport services.

Consular and passport operations are areas of increasing work as more Australians travel and live overseas. The number travelling overseas has almost doubled over the last ten years, a trend which is expected to continue. In addition, tens of thousands of Australian citizens now work and reside abroad, and this number too is likely to grow as a globalising economy draws on skills and expertise from around the world.

The Department regards it as a fundamental duty to extend appropriate assistance to Australians in need of consular services. While there are obvious limitations on what Australian consular officials can do in circumstances where foreign laws must be observed, the Department has improved the consular services provided to Australian citizens. It has established a Consular Response Group to manage particularly complex cases and has expanded the network of honorary consuls. It is committed to developing further international consular sharing arrangements and has introduced 24-hour consular staffing operations to enhance further the delivery of consular services to Australians in need.

## **Working with the public**

In addition to the many contacts on consular and passport services, the Department's interaction with the Australian community and the private sector is continuing to expand. This reflects the increased range of trade, economic and social issues dealt with internationally and the greater interest in international issues and negotiations on the part of non-governmental organisations (NGO) and business.

One example is the treaty-making process which the Government has changed to ensure greater consultation with the community, including business and NGOs, on the costs and benefits of international agreements to which the Government proposes to accede.

## **Australia's overseas aid program**

The purpose of Australia's development cooperation program is to assist developing countries to reduce poverty and improve the standard of living of their people through sustainable development. In doing this the aid program aims to assist in achieving a more secure and equitable international order.

In 1997–98 Australia's official development assistance (ODA) will total approximately \$1,440m. This represents a decline of 1% on 1996–97 expenditure. Australia's ODA to gross national product ratio in 1997–98 is expected to be 0.27%. This places Australia above the current weighted average of 0.25% for donors who are members of the Development Assistance Committee of the OECD.

The aid program is administered by the Australian Agency for International Development (AusAID) and is divided into three main areas: Country and Regional Assistance; Multilateral, Humanitarian and NGO Assistance; and funding to the Australian Centre for International Agricultural Research (ACIAR). In 1996–97, Country and Regional Assistance totalled \$868.8m; Multilateral, Humanitarian and NGO Assistance totalled \$430.9m; and ACIAR expenditure totalled \$40m. Expenditure on Aid Management and Administration totalled an additional \$53.8m.

Although AusAID administers most of Australia's development cooperation, expenditure on ODA-related activities also takes place in other government departments and agencies. In 1996–97, \$52.3m of total ODA was spent by other government agencies. In 1997–98, \$55.2m of total ODA is projected to be spent by other government agencies.

### 3.1 AUSTRALIAN AID FLOWS, Major Recipients — 1997–98 Estimate(a)

| Country          | \$m   |
|------------------|-------|
| Papua New Guinea | 319.2 |
| Indonesia        | 88.9  |
| Africa           | 87.7  |
| Viet Nam         | 66.0  |
| Philippines      | 56.7  |
| China            | 53.5  |
| Bangladesh       | 33.3  |
| Cambodia         | 32.1  |
| Thailand         | 22.5  |
| India            | 20.0  |
| Fiji             | 19.7  |
| Laos             | 18.1  |
| Vanuatu          | 12.9  |
| Samoa            | 11.0  |
| Sri Lanka        | 10.7  |
| Solomon Islands  | 11.1  |
| Tonga            | 10.0  |

(a) Total aid flows include assistance provided under Country and Regional Programs, multilateral agencies, emergency and relief assistance, NGO projects, and ACIAR activities.

Source: AusAID.

## Country and regional assistance

Over half of Australia's overseas development assistance is provided on a country program basis. Country programming involves formulating long-term development cooperation strategies, in partnership with recipient countries, which match recipient country needs with Australia's objectives and capacity to assist. Within the framework of country strategies, individual country programs comprise a range of discrete activities. These may include projects, the training of recipient country students, the provision of technical assistance, the supply of equipment and commodities, food aid, and NGO activities.

For the majority of recipient countries the nature of Australia's country assistance is reviewed annually, usually during high level consultations with partner governments. In addition, all country programs follow a regular cycle which includes planning, implementation and review of activities. This includes careful screening to ensure that activities have a poverty reduction focus, are environmentally sustainable and incorporate mechanisms to ensure that the benefits of development cooperation are shared equitably between men and women.

Additional support to individual countries is provided through regionally focused or multi-country programs, as well as through a variety of international organisations and community programs (see *Multilateral and humanitarian assistance, and assistance to NGOs*).

### Papua New Guinea

PNG receives the largest share of the Australian aid program, with total flows in 1997–98 estimated to reach \$319.2m, including country program assistance of \$313.7m. This represents over one-fifth of the total Australian development cooperation program, reflecting the significance of the relationship between the two countries.

Australia's aid program to PNG aims principally to promote sustainable development, self-reliance, stability and social cohesion and the successful implementation of PNG's economic reform program. In 1997–98, assistance in the form of programmed activities will continue to increase while aid in the form of direct budget support will decrease. This reflects an agreement by the two Governments to move progressively to a level of 100% jointly programmed activities by the year 2000. The

next few years will see a rapidly increasing pace of implementation of Australian activities in PNG in six mutually agreed sectors: education and training, health, infrastructure, law and order, renewable resources, and the private sector.

### South Pacific

Despite their relatively small economies and their distance from potential markets, many Pacific Island Countries (PICs) are performing well in terms of social development. However, both the Australian and Pacific Island Governments have recognised the urgent need for cooperation in pursuing economic reforms necessary to achieve sustainable growth. In addition, PICs face several emerging development challenges such as increasing urbanisation, which will create new health and environmental risks. In 1997–98, bilateral, multi-country and regional programs in the South Pacific will total around \$125m, making Australia the second largest donor to the region. The focus will be on education, health, economic and public sector reform, sustainable resource use and private sector development.

### East Asia

The East Asia region is one in which many countries continue to experience rapid and sustained economic growth. Some countries nevertheless remain among the poorest in the world. Assistance to the region in 1997–98 will total \$360.6m, including country program assistance of \$302m.

Assistance to Viet Nam, Cambodia and Laos, three of the world's poorest nations, will concentrate on poverty alleviation through targeted intervention in areas such as health, education and training, and the development and reconstruction of basic infrastructure. In Indonesia, Australian assistance supports human resource development, rural infrastructure development, environmental management, and maternal and child health care. Assistance to the Philippines will increasingly concentrate on the southern Philippines, particularly Mindanao, focusing on health, human resource development and rural infrastructure. Development assistance to Malaysia and Thailand is being wound down in recognition of their development achievements.

Assistance to China will total \$53.5m, including country program assistance of \$36.5m. This will focus on the environment, education and training, health and population, and community development.

### South Asia

Widespread poverty and low social development remain major problems in this region. In 1997–98, assistance to South Asia will total \$83m, including country program assistance of \$48.2m. Australia's aid program to the region focuses on food security, human resource development, technology transfer, institutional strengthening, health, agriculture, the environment and community development. The main recipients are Bangladesh (\$33.3m), India (\$20m), Sri Lanka (\$10.7m) and Nepal (\$6.7m).

### Africa

Unlike East Asian countries where the flow of private investment has grown rapidly, private investment in African countries has grown at best very slowly. In many countries it has stagnated. The bulk of Australian development aid to Africa goes to South Africa, Zimbabwe and Mozambique. Priority areas of assistance to these countries include capacity building at senior levels of government administration, education and training, water supply and land information. These countries will receive \$23 million of the \$35 million in programmed development aid to be provided to Africa in 1997–98. The remaining funds will go to another 15 countries, mainly in southern and eastern Africa, principally for scholarships for in-Australia training.

Total Australian aid to Africa, which includes refugee and emergency assistance and programs through the UN and NGOs, is expected to amount to \$87.7 million in 1997–98.

## Multilateral and humanitarian assistance, and assistance to NGOs

### Multilateral development banks and international organisations

The Australian Government recognises that multilateral cooperation can bring results that are unachievable in a bilateral program alone, especially for a medium-sized donor like Australia. Through support for multilateral agencies, Australia also influences their policy and program directions. To ensure that Australia is achieving its goals through multilateral development organisations, the various agencies are closely monitored.

Contributions to international organisations in 1997–98 will total \$330.9m (23% of Australia's total ODA). UN development agencies will

receive \$67.5m, with the largest contributions directed to the World Food Program (\$50.3m), the United Nations Development Program (\$6.5m) and the United Nations Children's Fund (\$4.5m). Australia's contributions totalling \$230.8m to the multilateral development banks will go mainly to the concessional lending arms of the World Bank and the Asian Development Bank, namely the International Development Association and the Asian Development Fund. Other beneficiaries of Australia's contributions to international organisations in 1997–98 include Commonwealth development organisations, international health and environment programs and international NGOs.

### Emergencies and refugees

Australia provides substantial assistance for refugees, internally displaced people and other victims of natural and man-made disasters. In 1997–98, \$81.2 million has been allocated for emergency and refugee assistance to developing countries.

Australia's emergency and refugee assistance is multifaceted. Immediate life-sustaining support in the form of food, water and shelter is provided for refugees and victims of disasters. Assistance is also provided for disaster preparedness programs which aim to strengthen the capacity of local authorities to respond to and prevent emergencies. However, the bulk of Australia's assistance is directed to rebuilding livelihoods and rehabilitating shattered infrastructure. Such support, which includes landmine clearance and health and water supply, is vital for the successful repatriation of refugees and the prevention of further crises.

Major recipients of AusAID's emergency and relief aid are Ethiopia, Sudan, Afghanistan, Cambodia and Rwanda. Australia also supports the programs of a number of international relief agencies, including the United Nations High Commissioner for Refugees and the International Committee of the Red Cross.

In the Pacific, a significant contribution is being made to disaster preparedness programs which aim to strengthen the institutional capacity of local authorities to respond effectively to natural disasters such as cyclones.

### Community programs

The Australian Government actively seeks the involvement of NGOs, the academic community and other professional groups in the delivery of the Australian aid program.

NGOs play a valuable role in translating the Australian community's concern for the poor and disadvantaged peoples of developing countries into activities which alleviate poverty in a direct and tangible way. Total funding channelled through NGOs is expected to be around \$88m in 1997–98. This includes development projects, volunteer programs and emergency relief assistance. A key element of this funding is the AusAID–NGO Cooperation Program (ANCP), which subsidises development activities designed and implemented by NGOs. The ANCP has been allocated \$18.8m in 1997–98. Funding is also provided through a number of opportunities for involvement by NGOs in country programs.

The aid program also supports academic research through the provision of funds to the National Centre for Development Studies and the Australian National University. The Government also commissions development-related research from other research institutions in Australia.

### Australian Centre for International Agricultural Research

ACIAR is a statutory body with its own Board, Director and Policy Advisory Council. It promotes research into improving sustainable agricultural production and natural resource management in developing countries. ACIAR also facilitates research collaboration between Australia and individual developing countries for mutual advantage by mobilising appropriate Australian research expertise to help developing countries to help themselves.

As well as commissioning research, ACIAR promotes project-related training and conducts pilot development studies to enhance the application of research results. The Centre is also responsible for Australia's contributions to international agricultural research centres such as the International Rice Research Institute. Funding provided to ACIAR in 1997–98 is \$40.1m.

### Aid management and administration

AusAID's principal aid management and administrative tasks include undertaking review functions to ensure the quality and effectiveness of Australian aid and developing aid policy in the context of the rapid growth in world trade and foreign direct investment.



AusAID's review functions comprise financial, project and contract management audits, project and program evaluations (including an evaluation program of environmentally relevant projects), and internal process reviews to assess the effectiveness of administrative and management operations.

Funding for aid management and administration in 1997–98 is \$57.4m.

## The network of Australian diplomatic and consular missions overseas

DFAT manages an extensive network of Australian diplomatic and consular missions abroad which support Australia's international interests, including providing consular and passport services. The Department also maintains State offices in all of the State capital cities and Darwin.

As at 30 June 1997, Australia maintained the diplomatic and consular representation overseas set out in tables 3.2 to 3.6.

### 3.2 AUSTRALIAN EMBASSIES, HIGH COMMISSIONS AND CONSULATES MANAGED BY DFAT

| Country           | Post                |
|-------------------|---------------------|
| Argentina         | Buenos Aires        |
| Austria           | Vienna              |
| Bangladesh        | Dhaka               |
| Barbados          | Bridgetown          |
| Belgium           | Brussels            |
| Brazil            | Brasilia            |
| Brunei Darussalam | Bandar Seri Begawan |
| Burma             | Rangoon             |
| Cambodia          | Phnom Penh          |
| Canada            | Ottawa              |
| Chile             | Santiago de Chile   |
| China             | Beijing             |
|                   | Guangzhou           |
|                   | Hong Kong           |
|                   | Shanghai            |
| Cyprus            | Nicosia             |
| Egypt             | Cairo               |
| Fiji              | Suva                |
| France            | Paris               |
| Germany           | Bonn                |
| Greece            | Athens              |
| Hungary           | Budapest            |

...continued

### 3.2 AUSTRALIAN EMBASSIES, HIGH COMMISSIONS AND CONSULATES MANAGED BY DFAT — continued

| Country                  | Post             |
|--------------------------|------------------|
| India                    | New Delhi        |
| Indonesia                | Bali             |
|                          | Jakarta          |
| Iran                     | Tehran           |
| Ireland                  | Dublin           |
| Israel                   | Tel Aviv         |
| Italy                    | Rome             |
| Japan                    | Tokyo            |
| Jordan                   | Amman            |
| Kazakhstan               | Almaty           |
| Kenya                    | Nairobi          |
| Kiribati                 | Tarawa           |
| Korea                    | Seoul            |
| Laos                     | Vientiane        |
| Lebanon                  | Beirut           |
| Malaysia                 | Kuala Lumpur     |
| Malta                    | Malta            |
| Mauritius                | Port Louis       |
| Mexico                   | Mexico City      |
| Micronesia               | Pohnpei          |
| Nepal                    | Kathmandu        |
| Netherlands              | The Hague        |
| New Caledonia            | Noumea           |
| New Zealand              | Wellington       |
| Nigeria                  | Lagos            |
| Pakistan                 | Islamabad        |
| Papua New Guinea         | Port Moresby     |
| Philippines              | Manila           |
| Poland                   | Warsaw           |
| Russia                   | Moscow           |
| Samoa                    | Apai             |
| Saudi Arabia             | Riyadh           |
| Singapore                | Singapore        |
| Solomon Islands          | Honiara          |
| South Africa             | Cape Town        |
|                          | Pretoria         |
| Spain                    | Madrid           |
| Sri Lanka                | Colombo          |
| Sweden                   | Stockholm        |
| Syria                    | Damascus         |
| Thailand                 | Bangkok          |
| Tonga                    | Nuku'alofa       |
| Turkey                   | Ankara           |
| United Kingdom           | London           |
| United States of America | Washington       |
|                          | Honolulu         |
|                          | New York         |
| Vanuatu                  | Port Vila        |
| Vatican                  | Holy See         |
| Venezuela                | Caracas          |
| Viet Nam                 | Hanoi            |
|                          | Ho Chi Minh City |
| Yugoslavia               | Belgrade         |
| Zimbabwe                 | Harare           |

Source: Department of Foreign Affairs and Trade.

**3.3 MULTILATERAL MISSIONS**

|      | Post     |
|------|----------|
| OECD | Paris    |
| UN   | Geneva   |
|      | New York |
|      | Vienna   |
| WTO  | Geneva   |

Source: Department of Foreign Affairs and Trade.

**3.4 CONSULATES MANAGED BY AUSTRADE**

| Country                  | Post          |
|--------------------------|---------------|
| Brazil                   | Sao Paulo     |
| Canada                   | Toronto       |
| Germany                  | Frankfurt     |
|                          | Hamburg       |
| India                    | Mumbai        |
| Italy                    | Milan         |
| Japan                    | Fukuoka       |
|                          | Nagoya        |
|                          | Osaka         |
|                          | Sapporo       |
|                          | Sendai        |
| New Zealand              | Auckland      |
| South Africa             | Johannesburg  |
| Turkey                   | Istanbul      |
| United Arab Emirates     | Dubai         |
| United States of America | Atlanta       |
|                          | Los Angeles   |
|                          | San Francisco |

Source: Department of Foreign Affairs and Trade.

**3.5 CONSULATES MANAGED BY THE DEPARTMENT OF IMMIGRATION AND MULTICULTURAL AFFAIRS**

| Country        | Post       |
|----------------|------------|
| Canada         | Vancouver  |
| United Kingdom | Manchester |

Source: Department of Foreign Affairs and Trade.

**3.6 AUSTRALIA'S NETWORK OF HONORARY CONSULS**

| Country                  | Post           |
|--------------------------|----------------|
| Bolivia                  | La Paz         |
| Brazil                   | Rio de Janeiro |
| Bulgaria                 | Sofia          |
| Colombia                 | Bogota         |
| Croatia                  | Zagreb         |
| Czech Republic           | Prague         |
| Ecuador                  | Guayaquil      |
| Estonia                  | Tallinn        |
| Finland                  | Helsinki       |
| French Polynesia         | Papeete        |
| Korea                    | Pusan          |
| Malaysia                 | Kota Kinabalu  |
|                          | Kuching        |
|                          | Penang         |
| Mexico                   | Guadalajara    |
|                          | Monterrey      |
| Norway                   | Oslo           |
| Papua New Guinea         | Lae            |
| Peru                     | Lima           |
| Romania                  | Bucharest      |
| Russia                   | Vladivostok    |
| Slovenia                 | Ljubljana      |
| Spain                    | Barcelona      |
|                          | Seville        |
| Trinidad and Tobago      | Port of Spain  |
| Ukraine                  | Kiev           |
| United Kingdom           | Edinburgh      |
| United States of America | Boston         |
|                          | Denver         |
| Uruguay                  | Montevideo     |

Source: Department of Foreign Affairs and Trade.

## Bibliography

Readers seeking further information about Australia's international relations should obtain *In the National Interest: Australia's Foreign and Trade Policy White Paper*. It is available for purchase from DFAT (02 6261 3114) or Australian Government Publishing Service bookshops, and for free on the Internet (at <http://www.dfat.gov.au/ini/wp.html>).

The Department's web site (<http://www.dfat.gov.au>) also contains information about current issues, together with a range of related material, including ministerial speeches, background information on Australia's relations with other countries and positions on international issues. Further information about the Department can be found in its 1996–97 Annual Report, which is also available on the Department's web site.



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## Introduction

This chapter outlines Australia's defence policy and presents an overview of the Defence Organisation, its functions and how it operates.

## Defence policy

Australia's defence policy is part of an integrated national effort that seeks to guarantee the nation's future security and prosperity. It contributes to this objective in two related ways — by developing and maintaining the capacity to defend Australia and its interests from armed attack; and promoting a regional and global security environment which enhances Australia's security by reducing the likelihood of armed force being used against Australia.

Australia is faced with numerous political, economic and social challenges, stemming from changes in the Australian community and economy, and from changes in the international strategic, political and economic situations. Australia needs an imaginative and forward looking approach if it is to secure its place in the changing pattern of relationships in the Asia-Pacific region.

The self-reliant defence of Australia remains the most important and demanding aim of Australia's defence policy. Hence the first objective is to build, maintain and support an Australian Defence force which is capable, without combat assistance from other countries, of defeating any attack which could be credibly mounted against Australia. A focus on the defence of Australia provides a clear basis for planning and a rationale for Australia's forces which has been understood and accepted both domestically and within the region.

Given the relatively small size of Australia's armed forces, limits on resources and the formidable geographical and environmental challenges that the defence of Australia presents, the development of more effective strategic and operational level planning and command and control is a high priority.

The successful pursuit of Australia's defence policy depends also on timely warning of significant developments in Australia's strategic and operational environment. The capacity of the Australian Defence Force (ADF) to respond appropriately to the changing security

environment and to undertake its tasks successfully requires accurate, reliable and timely information about activities and developments within the region.

To ensure the most efficient and effective support for Australia's combat capabilities, it is part of defence policy to harness the skills and expertise of Australian industry and the private sector and to employ leading edge technology in the application and support of military force.

Australian defence and security policy has to be responsive to developments in Australia's strategic environment. To this end, Australia's strategic outlook is kept under continuous review, and plans and programs are developed for the strategic posture, disposition, activities and development of the Defence Force. Current decisions in relation to force structure requirements and the estimations of the capabilities likely to be available within the region provide the underpinning for materiel and technology acquisitions and thus Australia's combat capabilities well into the future.

Australia does not, however, rely solely upon its capacity to develop and maintain an effective Defence Force in order to secure Australia's future. Australia cannot be defended adequately only by guarding its territory and looking on at the changes in Asia. Australia's defence policy is also to manage its security environment in such a way that conflicts of interest can be resolved without the use of military options. Australia seeks to ensure an environment in which the use of armed force against it is less likely, through the promotion of effective strategic relationships with regional countries, the maintenance of strong alliance relationships which strengthen Australia's defence, and support for the United Nations and other international endeavours which promote Australia's security.

Australia's international defence relationships are an important adjunct and complement to its diplomatic efforts to shape the regional security environment. The United States is Australia's most important alliance partner and the two countries continue to share many common security interests. Australia's relationship with the United States makes a very significant contribution to the quality and development of Australia's defence capabilities, through close consultations, training and exercises, and access to equipment, technology and intelligence.

Efforts to enhance Australia's relationship with the United States will not, however, be at the expense of relationships or activities with the region. The priority attached to developing Australia's relationships with its regional neighbours, and the increasing importance attached to regional engagement, will continue. Australia's objectives in regional engagement are to promote regional security and stability, and to develop the capacity to work with regional countries to confront future security challenges, either diplomatically or militarily.

Working with other regional forces, through bilateral, multilateral and alliance arrangements, Australia will reinforce the expanding web of relations that has emerged between it and other countries in the region. The aim is to ensure that Australia's relations with its neighbours are robust enough to deal with the uncertainties that arise in the normal course of defence and wider relations. The region's collective interests clearly lie in the promotion of stable yet flexible relations within the region and the peaceful resolution of issues arising out of conflicting viewpoints or claims.

Australia will also continue to contribute to international peacekeeping, providing forces as determined by the Government to support multinational security efforts, and to provide technical and policy support for non-proliferation initiatives.

## Changing directions

In March 1997, the Defence Efficiency Review (DER) made a wide range of recommendations to the Minister for Defence for reforming Defence management and financial processes to deliver a more flexible, efficient, effective and capability focused Defence Organisation.

The Government's response to the DER is the Defence Reform Program (DRP), which is to be implemented progressively over a three to four year period. The salient features of the DRP were: moving to a program structure of fourteen functionally based programs to eliminate duplication, allow managers to focus on core business and encourage a customer focus; achieving one-off savings in excess of \$500m and an ongoing redirection of resources of \$770m to \$1,000m to improving ADF capabilities; and achieving net funded reductions of 3,100 civilian and 4,700 military positions. About half of these military positions are expected to be redirected to combat and combat support areas. The DRP

complements ongoing initiatives such as Restructuring the Army and the Commercial Support Program.

## The Defence Organisation

Australia's defence policy is implemented through an integrated civil-military Defence Organisation. Resources and activities are managed through fourteen major programs: Defence Headquarters, Navy, Army, Air Force, Intelligence, Support Command, Joint Education & Training, Defence Personnel Executive, Acquisition, Science & Technology, Defence Estate, Corporate Information, Corporate Support and Finance & Inspector-General. The Defence Headquarters is jointly headed by a Service Officer and a civilian, reflecting the integrated nature of the Defence Organisation. The heads of the Services, Support Command, Joint Education & Training and Defence Personnel Executive are Service personnel, with civilians responsible for the other programs.

## Planning and evaluation

To provide a management framework for its activities, the Defence Organisation works to a 10 year, and beyond, capability planning horizon and a five year financial programming horizon. Proposals for capability development and other policy initiatives are examined in detail prior to submission to the Government for consideration, generally in the context of the annual Defence Budget. Other key planning documents include the Defence Corporate Plan and the classified Five Year Defence Program.

Evaluation of activities in Defence falls into three broad categories. Self-evaluations are conducted by the managers of program elements, either as specific evaluation activities or as part of ongoing program arrangements. Corporate evaluations affect the overall management of Defence and the business of all or many of the fourteen programs. Independent evaluations comprise the more extensive and formal evaluations undertaken outside of the normal management framework. Reviews by the Inspector-General, as well as external reviews by the Australian National Audit Office and Parliamentary Committees, are included in this category. Australian Defence Force (ADF) exercises are an important part of Defence's evaluation strategy. They develop and test ADF capability, and evaluation is conducted at the Service, corporate and independent levels.

The final report of the Defence Performance Information Review was presented to the Ministers for Defence and Finance in July 1997. The purpose of the review is to improve the capacity of Defence to demonstrate performance against the objectives set by Government. The review was conducted in consultation with the Department of Finance. The recommendations contained in the final report will result in Defence developing more rigorous and comprehensive performance measurement and assessment, based on outputs, through the introduction of an integrated performance management framework. Implementation of the framework will be staged, with mature arrangements in place by 1999–2000.

## Defence programs

The objectives and functions of the fourteen programs identified above are described below.

### Defence Headquarters

The objective of this program is to provide for higher command and control of the ADF and to advise on strategic policy and long-term defence planning, the management of international defence relationships and the development of Defence capabilities.

The Defence Headquarters is an integrated civil-military joint Service Program headed by the Vice Chief of the Defence Force and the Deputy Secretary Strategy and Intelligence. In addition to its various policy divisions the Defence Headquarters incorporates Headquarters Australian Theatre.

### Navy

The objective of the Royal Australian Navy is to provide maritime forces capable of effective maritime operations in the pursuit of Australia's security interests, using both regular and reserve forces, and expanding in a timely manner in response to warning of more substantial conflict.

The Navy provides forces for maritime operations, including patrol and response, interdiction and strike, and peacetime activities. The total force includes both regular and reserve personnel who operate surface ships, submarines and rotary wing aircraft in Australia's maritime environment. They are supported from a number of operational, training and support bases around the country, but principally in Sydney, Darwin and Perth.

### Army

The objective of the army is to provide a potent, versatile and modern army to promote the security of Australia and protect its people and interests.

The Army provides forces for land operations, including surveillance, reconnaissance, special recovery and counter terrorism. These land forces are capable of dealing with peacetime operational tasks and the types of security threats that could arise in the shorter term, and are capable of expansion in the longer term.

### Air Force

The objective of the Royal Australian Air Force (RAAF) is to prepare for, conduct and sustain effective air operations to promote Australia's security.

Air power plays a major role in surveillance and intelligence gathering in Australia's sea and air approaches, denying those approaches to an adversary and defeating incursions into Australia's territory. The RAAF emphasises joint operations with Army and Navy, contributing to enhanced regional security and supporting the civilian community.

### Intelligence

The objective of the Intelligence Program is to provide intelligence, primarily on strategic and military issues, to Defence and other parts of Government, and to the ADF for the conduct of military operations.

The Defence Intelligence Organisation (DIO) assesses and distributes intelligence on strategic and military developments and is responsible for the provision of intelligence to ADF operations. The Defence Signals Directorate (DSD) collects and distributes foreign signals intelligence and provides advice and services to Defence and other parts of Government on computer and communications security.

### Support Command

The objective of this Program is to support the operational capabilities of the ADF through the provision of materiel support.

Support Command is structured to provide logistic support in a joint manner and individually to maritime, land and air forces. It also operates Emergency Management Australia (EMA).

### **Joint education and training**

This Program provides joint training and education policy for the Defence Organisation and seeks to develop a joint education and rationalised training organisation for the Defence Force.

Joint Education and Training is made up of a policy body and Joint Officer Education which centralises the policy, resource administration and support functions of all officer education institutions.

### **Defence Personnel Executive**

The objective of the Defence Personnel Executive Program is to develop integrated personnel policies and services that meet current and future Defence capability and support needs.

This Program provides personnel support services, both Service and civilian, and provides ADF health services.

### **Acquisition**

The objective of the Acquisition Program is to realise the Government's priorities for the development of Australian defence capabilities through timely acquisition and delivery of major capital equipment and systems that meet endorsed operational requirements, achieve value for money and are supportable; and to develop policies to enhance the capability of Australian industry in support of defence self-reliance.

Activity is continuing on a program of major defence acquisitions including some 168 active projects at a cost of \$35.7b.

### **Science and Technology**

This Program is the research and development arm of the Department of Defence, and is the second largest R&D organisation in Australia. The role of the Defence Science and Technology Organisation is to give advice that is professional, impartial and informed on the application of science and technology that is best suited to Australia's defence and security needs.

The Science and Technology Program provides the core of Australia's skills in defence research and its applications. There are four principal supporting objectives: to position Australia to exploit future developments in technology which show promise for defence application; to ensure that Australia is an informed buyer of

equipment; to develop new capabilities where Australia's circumstances require this; and to support existing capabilities by increasing operational performance and reducing the costs of ownership.

### **Defence Estate**

The objective of this Program is to provide professional management of the Defence Estate to facilitate the best disposition of people and equipment in peace and to support effective operations in war.

Defence Estate consists of organisations dealing with finance and energy, environmental and heritage management, capital works, estate services and regional facilities operations.

### **Corporate Information**

This program aims to provide cost effective corporate information technology services and support to the Defence Organisation.

Corporate Information is made up of Information Management, to provide overall information policy and planning for Defence; Information Systems, to operate corporate information management systems; and Computing Bureau Support, to provide information technology management and advice to client areas of the Defence Organisation.

### **Corporate Support**

The objective of the Corporate Support Program is to provide cost effective corporate and administrative support services across the Defence Organisation.

Corporate Support encompasses the base support, public information and legal functions of the Defence Organisation.

### **Finance and Inspector-General**

The objectives of the Finance and Inspector-General Program are to provide financial resource management, and accounting policies and services and related reporting and accountability requirements, to achieve the most cost effective use of Defence resources; to advance Defence management policies and practices through independent performance evaluation, review, audit and fraud investigation; to promote a Defence-wide understanding and adherence to ethical conduct; to provide security advice and support; and to coordinate the successful ongoing implementation of the Commercial Support Program.

## Resources

### Personnel numbers

Although the Defence Organisation has its policy and administrative centre in Canberra, most of its personnel are located in some 600 units and establishments throughout Australia.

The ADF has some 57,000 Regular personnel and 28,000 Reserves, while the Department of Defence has some 19,000 civilians.

Of the civilian employees in the Defence Organisation, some 11,800 work directly for the ADF, some 2,400 are in the Defence Science and Technology Organisation, over 1,400 are in regional offices, and some 3,400 are in the central office.

Women represent 13.4% of the ADF. Some 90% of ADF positions are now available to women.

Table 4.1 shows details of Defence personnel by category at 30 June 1997. Table 4.2 provides a time series for Defence personnel at 30 June 1992 to 1997.

### Budget and expenditure

The 1997–98 Defence budget of \$10,405m will enable Defence to maintain its capital investment programs, exercises, deployments and training activities.

The Defence share of GDP for 1997–98 is estimated to be 1.9%, which is the same as for 1996–97. Defence outlays are estimated to be 8.2% of 1997–98 Commonwealth outlays, compared with 7.8% 1996–97.

The proportion of Defence expenditure spent in Australia continues at a high level, reflecting local industry involvement and increased self-reliance. It is estimated that some 91% of total Defence expenditure will be spent in Australia during 1997–98, including over 64% of capital equipment expenditure. This compares with the 1996–97 achievement of 85% of total Defence Budget outlays and 54% of capital equipment expenditure in Australia.

Table 4.3 shows the outlays of the Department of Defence by each program over the years 1991–92 to 1996–97.

#### 4.1 DEFENCE SERVICE AND CIVILIAN PERSONNEL, 30 June 1997

|                          | Males         |             | Females      |             |
|--------------------------|---------------|-------------|--------------|-------------|
|                          | no.           | %           | no.          | %           |
| NAVY                     |               |             |              |             |
| Trained force            |               |             |              |             |
| Officers                 | 2 365         | 16.1        | 481          | 3.3         |
| Other ranks              | 8 755         | 59.6        | 1 519        | 10.3        |
| Training force           |               |             |              |             |
| Officers                 | 252           | 1.7         | 85           | 0.6         |
| Other ranks              | 1 080         | 7.4         | 164          | 1.1         |
| <b>Total</b>             | <b>12 452</b> | <b>84.7</b> | <b>2 249</b> | <b>15.3</b> |
| ARMY                     |               |             |              |             |
| Trained force            |               |             |              |             |
| Officers                 | 3 927         | 15.2        | 531          | 2.1         |
| Other ranks              | 17 498        | 67.6        | 1 961        | 7.6         |
| Training force           |               |             |              |             |
| Officers                 | 599           | 2.3         | 145          | 0.6         |
| Other ranks              | 1 078         | 4.2         | 146          | 0.6         |
| <b>Total</b>             | <b>23 102</b> | <b>89.3</b> | <b>2 783</b> | <b>10.8</b> |
| AIR FORCE                |               |             |              |             |
| Trained force            |               |             |              |             |
| Officers                 | 3 108         | 18.7        | 510          | 3.1         |
| Other ranks              | 10 318        | 62.0        | 2 012        | 12.1        |
| Training force           |               |             |              |             |
| Officers                 | 497           | 3.0         | 84           | 0.5         |
| Other ranks              | 62            | 0.4         | 39           | 0.2         |
| <b>Total</b>             | <b>13 985</b> | <b>84.1</b> | <b>2 645</b> | <b>15.9</b> |
| AUSTRALIAN DEFENCE FORCE |               |             |              |             |
| Trained force            |               |             |              |             |
| Officers                 | 9 400         | 16.4        | 1 522        | 2.7         |
| Other ranks              | 36 571        | 63.9        | 5 492        | 9.6         |
| Training force           |               |             |              |             |
| Officers                 | 1 348         | 2.4         | 314          | 0.6         |
| Other ranks              | 220           | 3.9         | 349          | 0.6         |
| <b>Total</b>             | <b>49 539</b> | <b>86.6</b> | <b>7 677</b> | <b>13.4</b> |
| CIVILIANS                |               |             |              |             |
| Senior executive staff   | 88            | 0.5         | 9            | 0.0         |
| Other staff              | 12 830        | 67.1        | 6 188        | 32.4        |
| <b>Total</b>             | <b>12 918</b> | <b>67.6</b> | <b>6 197</b> | <b>32.4</b> |
| RESERVES                 |               |             |              |             |
| Navy                     | 1 170         | 4.2         | 197          | 0.7         |
| Army                     | 20 459        | 72.6        | 4 421        | 15.7        |
| Air Force                | 1 630         | 5.8         | 319          | 1.1         |
| <b>Total</b>             | <b>23 259</b> | <b>82.5</b> | <b>4 937</b> | <b>17.5</b> |

Source: Department of Defence.

## 4.2 DEFENCE SERVICE AND CIVILIAN PERSONNEL, 30 June

|                          | 1992   |      | 1993   |      | 1994   |      | 1995   |      | 1996   |      | 1997   |      |
|--------------------------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
|                          | no.    | %    | no.    | %    | no.    | %    | no.    | %    | no.    | %    | no.    | %    |
| Navy                     |        |      |        |      |        |      |        |      |        |      |        |      |
| Males                    | 13 470 | 87.5 | 13 170 | 87.6 | 12 878 | 87.1 | 12 563 | 85.6 | 12 232 | 84.9 | 12 452 | 84.7 |
| Females                  | 1 925  | 12.5 | 1 871  | 12.4 | 1 900  | 12.9 | 2 116  | 14.4 | 2 172  | 15.1 | 2 249  | 15.3 |
| Army                     |        |      |        |      |        |      |        |      |        |      |        |      |
| Males                    | 27 195 | 90.2 | 25 194 | 89.8 | 23 731 | 90.1 | 23 377 | 89.9 | 23 225 | 89.5 | 23 102 | 89.3 |
| Females                  | 2 962  | 9.8  | 2 860  | 10.2 | 2 616  | 9.9  | 2 632  | 10.1 | 2 739  | 10.5 | 2 783  | 10.8 |
| Airforce                 |        |      |        |      |        |      |        |      |        |      |        |      |
| Males                    | 18 176 | 84.5 | 16 299 | 84.3 | 15 063 | 84.6 | 14 747 | 84.3 | 14 425 | 83.8 | 13 985 | 84.1 |
| Females                  | 3 326  | 15.5 | 3 046  | 15.7 | 2 744  | 15.4 | 2 754  | 15.7 | 2 787  | 16.2 | 2 645  | 15.9 |
| Australian Defence Force |        |      |        |      |        |      |        |      |        |      |        |      |
| Males                    | 58 841 | 87.8 | 54 663 | 87.5 | 51 672 | 87.7 | 50 686 | 87.1 | 49 882 | 86.6 | 49 539 | 86.6 |
| Females                  | 8 213  | 12.2 | 7 777  | 12.5 | 7 260  | 12.3 | 7 502  | 12.9 | 7 698  | 13.4 | 7 677  | 13.4 |
| Civilians                |        |      |        |      |        |      |        |      |        |      |        |      |
| Males                    | 16 431 | 68.9 | 15 217 | 68.8 | 14 362 | 68.5 | 14 140 | 68.1 | 13 894 | 68.2 | 12 918 | 67.6 |
| Females                  | 7 401  | 31.1 | 6 888  | 31.2 | 6 604  | 31.5 | 6 627  | 31.9 | 6 478  | 31.8 | 6 197  | 32.4 |
| Reserves                 |        |      |        |      |        |      |        |      |        |      |        |      |
| Males                    | 23 326 | 83.2 | 22 132 | 83.1 | 20 962 | 82.5 | 19 892 | 81.8 | 20 175 | 81.2 | 23 259 | 82.5 |
| Females                  | 4 697  | 16.8 | 4 508  | 16.9 | 4 437  | 17.5 | 4 428  | 18.2 | 4 674  | 18.8 | 4 937  | 17.5 |
| Ready Reserves           |        |      |        |      |        |      |        |      |        |      |        |      |
| Males                    | —      | —    | 2 286  | 97.0 | 2 693  | 97.3 | 3 099  | 96.5 | 3 490  | 95.4 | —      | —    |
| Females                  | —      | —    | 71     | 3.0  | 76     | 2.7  | 113    | 3.5  | 169    | 4.6  | —      | —    |

Source: Department of Defence

## 4.3 DEFENCE OUTLAYS

| Program                   | 1991-92          | 1992-93          | 1993-94          | 1994-95          | 1995-96           | 1996-97          |              |
|---------------------------|------------------|------------------|------------------|------------------|-------------------|------------------|--------------|
|                           | \$'000           | \$'000           | \$'000           | \$'000           | \$'000            | \$'000           | %            |
| Forces executive          | 1 132 847        | 527 732          | 582 291          | 589 562          | 619 218           | 498 290          | 5.0          |
| Navy                      | 1 321 000        | 1 382 982        | 1 563 738        | 1 599 979        | 1 700 635         | 1 652 772        | 16.5         |
| Army                      | 1 982 808        | 2 040 428        | 2 357 401        | 2 268 548        | 2 306 974         | 2 428 059        | 24.3         |
| Air Force                 | 1 637 359        | 1 687 566        | 1 842 923        | 1 816 297        | 1 875 402         | 1 873 405        | 18.7         |
| Strategy and intelligence | 182 680          | 205 505          | 219 503          | 220 016          | 211 482           | 204 958          | 2.0          |
| Acquisition               | 2 446 273        | 2 684 321        | 2 666 092        | 2 707 616        | 2 232 624         | 2 312 398        | 23.1         |
| Budget and management     | 441 283          | 409 457          | 272 229          | 302 459          | 829 106           | 774 411          | 7.7          |
| Science and technology    | 218 262          | 219 890          | 242 155          | 226 690          | 235 169           | 254 889          | 2.5          |
| <b>Total</b>              | <b>9 362 512</b> | <b>9 157 881</b> | <b>9 746 332</b> | <b>9 731 067</b> | <b>10 010 610</b> | <b>9 999 182</b> | <b>100.0</b> |

Source: Department of Defence.



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## Introduction

Population statistics are not themselves indicators of well-being, whether of individuals, groups or the population as a whole. However, they underpin the discussion of a wide range of issues relating to the population, including immigration, multiculturalism, ageing and population sustainability.

The changing size and distribution of Australia's population has implications for service provision and delivery in areas such as health, education, housing and the labour market. Population trends underlie many social changes and assist in the planning of all areas of social and economic policy.

The principal source of data on the Australian population is the Census of Population and Housing, which has been conducted at five-yearly intervals since 1961. The most recent census was in 1996, and some results from it are included in this chapter. Compulsory registration of births, deaths and marriages also provides valuable information between censuses, as do the details supplied by incoming and outgoing overseas travellers. Data on divorces and interstate migration are compiled, respectively, from court and administrative records.

## Population structure

### Introduction

This section examines the structure of the population: its size, age profile and distribution. There is an emphasis on changes in the structure over time, especially changes in the growth rate of the population.

As shown in table 5.1, Australia's resident population at 30 June 1996 was 18.3 million, an increase of 1.4% over the previous year. The slightly higher growth rate in 1995–96 was mainly due to an increase in net overseas migration. In the year ended 30 June 1996, the net gain from overseas migration was 114,200, 43% more than the previous year (80,100).

The national growth rate for the twelve months to June 1996 was similar to the growth rates in the United States of America (1.0%), New Zealand (1.1%), Thailand (1.0%), China (1.0%) and Indonesia (1.5%). The growth rates for Japan (0.2%), the United Kingdom (0.2%) and Germany (0.7%) were well below that of Australia, while Singapore (1.9%), Hong Kong (1.9%), Malaysia (2.1%) and Papua New Guinea (2.3%) experienced growth rates above that of Australia. These growth rates are shown in table 5.2.

**5.1 ESTIMATED RESIDENT POPULATION AND COMPONENTS OF POPULATION CHANGE(a), 1991–96**

| Year ended<br>30 June | Live<br>births(b) | Deaths(b) | Natural<br>increase(b) | Net<br>permanent<br>and<br>long-term<br>movement | Category<br>jumping(c) | Net overseas<br>migration(d) | Population          |             |             |
|-----------------------|-------------------|-----------|------------------------|--------------------------------------------------|------------------------|------------------------------|---------------------|-------------|-------------|
|                       |                   |           |                        |                                                  |                        |                              | At end of<br>period | Increase(e) | Increase(e) |
|                       | '000              | '000      | '000                   | '000                                             | '000                   | '000                         | '000                | '000        | %           |
| 1991                  | 261.2             | 119.6     | 141.6                  | 94.8                                             | -8.3                   | 86.4                         | 17 284.0            | 218.9       | 1.28        |
| 1992                  | 256.8             | 120.8     | 136.1                  | 89.9                                             | -21.0                  | 68.9                         | 17 491.5            | 207.4       | 1.20        |
| 1993                  | 258.2             | 121.3     | 136.9                  | 62.7                                             | -32.2                  | 30.5                         | 17 661.7            | 170.2       | 0.97        |
| 1994                  | 256.7             | 123.5     | 133.3                  | 67.4                                             | -20.6                  | 46.8                         | 17 847.4            | 185.7       | 1.05        |
| 1995                  | 256.7             | 126.2     | 130.5                  | 93.0                                             | -12.9                  | 80.1                         | 18 063.3            | 215.8       | 1.21        |
| 1996p                 | 252.4             | 126.5     | 126.0                  | 109.7                                            | 4.5                    | 114.2                        | 18 311.5            | 248.2       | 1.37        |

(a) From the September quarter 1993, population estimates include Christmas Island and the Cocos (Keeling) Islands. (b) Numbers of births and deaths are on a year of occurrence rather than year of registration basis, and will therefore differ from the Births, Deaths and Marriages part of this chapter. (c) An adjustment for the effect of persons whose duration of stay (category) differs from their stated intentions, entailing a re-classification from short-term to permanent/long-term or vice versa. (d) Sum of the net permanent and long-term movement plus category jumping. (e) For dates prior to June 1996, differences between the total increase shown and the sum of the natural increase and net overseas migration arise from retrospective adjustments to population estimates (which are made after each Census) to compensate for any intercensal discrepancy. A description of intercensal discrepancy is contained in the ABS Information Paper: Population Estimates: Concepts, Sources and Methods (3228.0).

Source: Australian Demographic Statistics (3101.0).

5.2 POPULATION AND RATE OF GROWTH OF SELECTED COUNTRIES

| Country                  | Population as at 30 June |                  | Rate of growth<br>% |
|--------------------------|--------------------------|------------------|---------------------|
|                          | 1995<br>millions         | 1996<br>millions |                     |
| Australia                | 18.1                     | 18.3             | 1.4                 |
| China                    | 1 198.1                  | 1 210.0          | 1.0                 |
| Germany                  | 83.0                     | 83.5             | 0.7                 |
| Hong Kong                | 6.2                      | 6.3              | 1.9                 |
| Indonesia                | 203.5                    | 206.6            | 1.5                 |
| Japan                    | 125.2                    | 125.5            | 0.2                 |
| Malaysia                 | 19.6                     | 20.0             | 2.1                 |
| New Zealand              | 3.5                      | 3.6              | 1.1                 |
| Papua New Guinea         | 4.3                      | 4.4              | 2.3                 |
| Singapore                | 3.3                      | 3.4              | 1.9                 |
| Thailand                 | 58.2                     | 58.9             | 1.0                 |
| United Kingdom           | 58.4                     | 58.5             | 0.2                 |
| United States of America | 263.0                    | 265.6            | 1.0                 |
| <b>World</b>             | <b>5 702.0</b>           | <b>5 771.0</b>   | <b>1.5</b>          |

Source: U.S. Bureau of the Census, International Data Base; Population Reference Bureau, World Population Data Sheet 1996; Australian Demographic Statistics (3101.0).

### Population size

Australia's population of 18.3 million at 30 June 1996 was almost five times the size of the population at the time of Federation (1 January 1901). The main component of Australia's population growth has been natural increase which, since the beginning of the twentieth century, has contributed about two thirds of the total growth. Net overseas migration has also contributed to natural increase through the Australian-born children of migrants. Components of population growth are discussed in more detail in the next section.

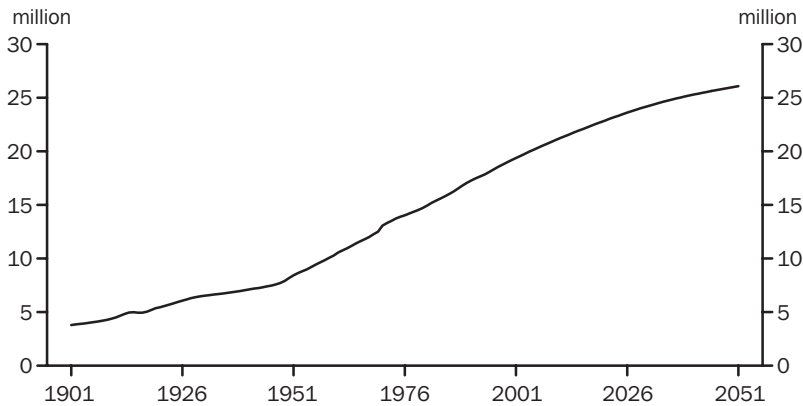
The ABS publishes projections of the Australian population to the year 2051, based on a combination of assumptions concerning future

levels of births, deaths and migration. Four different sets of projections are compiled, based on differing levels of these variables. Series A, which assumes a medium level of fertility, low level of overseas migration and medium level of interstate migration, has been used throughout this chapter.

Australia's population is projected to grow to 22.9 million in 2021 and 26.1 million in 2051. The population growth rates in the first half of the twenty-first century are projected to be much slower than any experienced since European settlement.

Graph 5.3 shows the growth in Australia's population since 1901, and projected population numbers to the year 2051.

### 5.3 POPULATION OF AUSTRALIA, Actual and Projected – 1901–2051(a)(b)



(a) Excludes full blooded Aboriginal people before 1961. (b) A break in series occurred in 1971 due to a change in the definition and measurement of the population.

Source: Australian Demographic Trends (3102.0); Projections of the Populations of Australia, States and Territories (3222.0).

The growth in population has not been evenly distributed across the States and Territories. At Federation, South Australia had nearly twice the population of Western Australia, which in turn had only marginally more people than Tasmania. However, in 1982 Western Australia surpassed South Australia as the fourth most populous State. In 1996 Western Australia had 3.7 times as many people as Tasmania.

Queensland is projected to replace Victoria as the second largest State by 2026, and the Australian Capital Territory is projected to grow to be larger than Tasmania by 2044.

Australian women, on average, have less than two children, which is expected to continue for the near future. If there were no net migration, Australia's population would peak at 20.7 million in 2033. Even with net overseas migration of 70,000 a year, population growth rates are projected to slow to the extent that the

populations of Tasmania, South Australia and Victoria would peak within the next 50 years.

On those assumptions, Tasmania's population is projected to peak first, around the year 2020, with a population of about 500,000, 6% higher than the 1996 population. The South Australian population is projected to peak in 2033 at 1.6 million, 12% larger than the population in 1996. The Victorian population would peak in 2038 when it would reach 5.3 million, a level 16% higher than its 1996 level.

The highest rates of growth are projected to occur in Queensland (86%) and Western Australia (70%) on the assumption that they would continue to attract people from other States. By 2046, Queensland is projected to be home to 6.2 million people.

These projections are summarised in table 5.4.

#### 5.4 POPULATION, Australia's States and Territories — 1906–2046

|               | NSW   | Vic.  | Qld   | SA    | WA    | Tas. | NT   | ACT  | Aust.  |
|---------------|-------|-------|-------|-------|-------|------|------|------|--------|
| As at 30 June | '000  | '000  | '000  | '000  | '000  | '000 | '000 | '000 | '000   |
| 1906          | 1 504 | 1 212 | 537   | 363   | 255   | 183  | 4    | ..   | 4 059  |
| 1916          | 1 890 | 1 413 | 686   | 441   | 313   | 194  | 5    | 3    | 4 943  |
| 1926          | 2 344 | 1 695 | 861   | 553   | 381   | 212  | 4    | 7    | 6 056  |
| 1936          | 2 666 | 1 845 | 982   | 588   | 452   | 230  | 5    | 10   | 6 778  |
| 1946          | 2 945 | 2 025 | 1 090 | 635   | 493   | 252  | 11   | 16   | 7 465  |
| 1956          | 3 554 | 2 593 | 1 382 | 849   | 675   | 318  | 20   | 35   | 9 426  |
| 1966(a)       | 4 238 | 3 220 | 1 674 | 1 095 | 848   | 371  | 57   | 96   | 11 599 |
| 1976(b)       | 4 960 | 3 810 | 2 092 | 1 274 | 1 178 | 412  | 98   | 208  | 14 033 |
| 1986          | 5 532 | 4 161 | 2 625 | 1 383 | 1 459 | 446  | 154  | 259  | 16 018 |
| 1996p         | 6 204 | 4 561 | 3 339 | 1 474 | 1 766 | 475  | 182  | 308  | 18 311 |
| 2006          | 6 807 | 4 857 | 4 022 | 1 553 | 2 056 | 491  | 204  | 349  | 20 343 |
| 2016          | 7 311 | 5 069 | 4 639 | 1 604 | 2 330 | 500  | 229  | 389  | 22 073 |
| 2026          | 7 759 | 5 221 | 5 224 | 1 638 | 2 584 | 499  | 250  | 422  | 23 601 |
| 2036          | 8 114 | 5 294 | 5 755 | 1 644 | 2 807 | 485  | 269  | 451  | 24 821 |
| 2046          | 8 362 | 5 273 | 6 220 | 1 623 | 3 001 | 460  | 286  | 475  | 25 702 |

(a) Prior to 1961, data exclude full-blooded Aboriginal people. (b) In 1971 there was a break in series due to a change in the definition and measurement of the population.

Source: Australian Demographic Trends (3102.0); Australian Demographic Statistics (3101.0); Projections of the Populations of Australia, States and Territories (3222.0).

## Growth

Population growth results from natural increase (the difference between births and deaths) and net overseas migration (the difference between immigration and emigration).

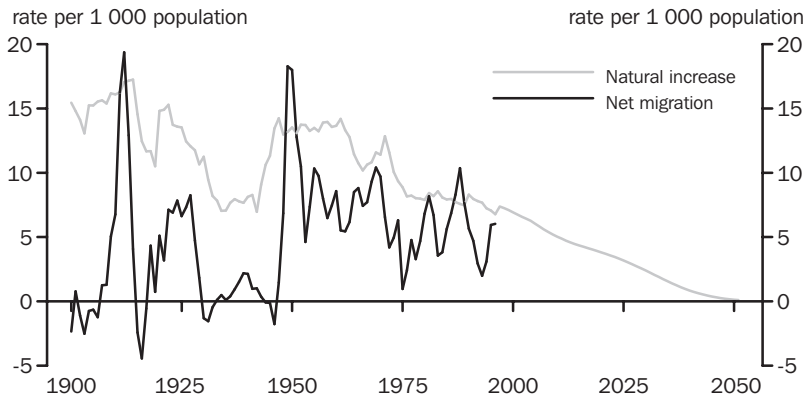
Australia's population grew from 3.8 million at the turn of the century to 18.3 million in June 1996. The second half of the century has seen higher rates of growth than the first, due to strong natural increase, with the post World War II baby boom and falling death rates, and increased net overseas migration. Natural increase has been the main source of the growth

since the turn of the century, contributing two-thirds of the total increase between 1901 and 1996.

Net overseas migration, while a significant source of growth, is much more volatile, fluctuating under the influence of government policy as well as political, economic and social conditions in Australia and the rest of the world.

The growth rates due to natural increase and net migration from 1900 to the present, and projections of natural increase to the year 2051, are shown in graph 5.5.

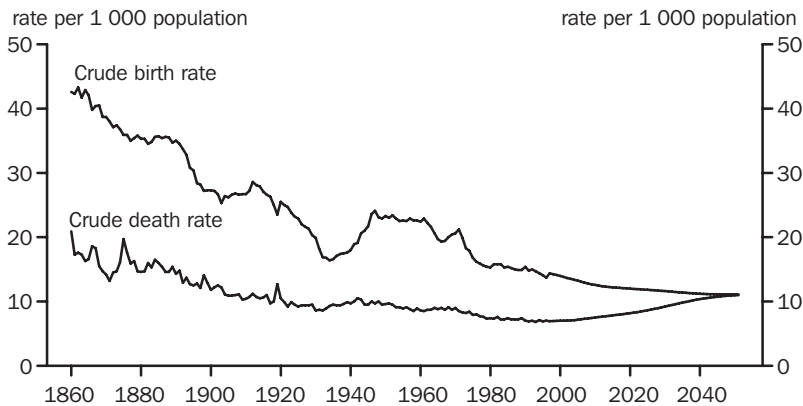
#### 5.5 COMPONENTS OF POPULATION GROWTH 1900–2051, Australia



Source: Australian Demographic Trends (3102.0), Australian Demographic Statistics (3101.0); Projections of the Populations of Australia, States and Territories (3222.0).



## 5.6 COMPONENTS OF NATURAL INCREASE



Source: *Australian Demographic Trends* (3102.0); *Australian Demographic Statistics* (3101.0); *Projections of the Populations of Australia, States and Territories* (3222.0).

In the 1860s, the average annual rate of natural increase was 24 per 1,000 population. It fell rapidly over the next 80 years, and by the mid 1930s the rate was 7.1 per 1,000. In the post war years the baby boom, and the immigration of many young people who then had children in Australia, increased Australia's birth rate and the rate of natural increase. Natural increase was over 13 per 1,000 population every year from 1946 to 1962.

Since 1962 falling fertility has led to a fall in the rate of natural increase. In 1996, the rate of natural increase fell below 7 per thousand for the first time.

Since 1860, the crude death rate has fallen from about 21 deaths per 1,000 population to 7 in 1996. Improvements in medical technology and healthier lifestyles are projected to continue, increasing people's life expectancy. Despite this, the ageing of the population is projected to lead to an increase in the crude death rate. The rate of natural increase is projected to fall to zero around the middle of next century. If there were no net migration to boost the population of childbearing age, natural increase would be negative by 2033. Crude birth and death rates

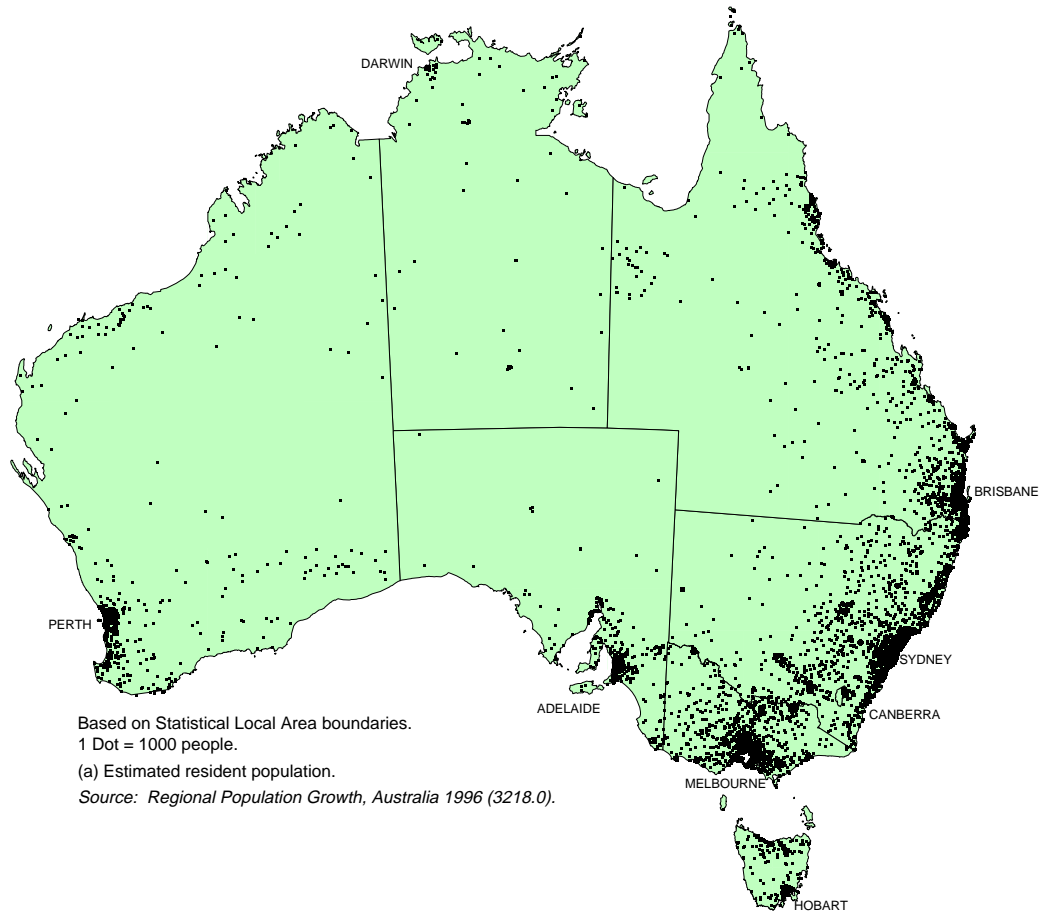
from 1860 to the present, and projections to the year 2051, are shown in graph 5.6.

### Distribution

Most of Australia's population is concentrated in two widely separated coastal regions. By far the largest of these, in terms of area and population, lies in the south-east and east. The smaller of the two regions is in the south-west of the continent. In both coastal regions the population is concentrated into urban centres, particularly the State/Territory capital cities. Half the area of the continent contains only 0.3% of the population, and the most densely populated 1% of the continent contains 84% of the population. The distribution of Australia's population is shown in map 5.7.

Although New South Wales remains the most populous State, with 6.2 million people at 30 June 1996, Queensland has shown the highest level of growth over the last five years, increasing by 12.8% between 1991 and 1996. In contrast, the populations in South Australia and Tasmania have remained comparatively stable, increasing by 1.9% and 1.7% over the same period (see table 5.8).

5.7 POPULATION(a) DISTRIBUTION, 1996



5.8 ESTIMATED RESIDENT POPULATION BY STATE AND TERRITORY

|               | NSW     | Vic.    | Qld     | SA      | WA      | Tas.  | NT    | ACT(a) | Aust.(b) |
|---------------|---------|---------|---------|---------|---------|-------|-------|--------|----------|
| As at 30 June | '000    | '000    | '000    | '000    | '000    | '000  | '000  | '000   | '000     |
| 1991          | 5 898.7 | 4 420.4 | 2 961.0 | 1 446.3 | 1 636.1 | 466.8 | 165.5 | 289.3  | 17 284.0 |
| 1992          | 5 960.7 | 4 454.8 | 3 029.0 | 1 456.5 | 1 657.7 | 469.8 | 168.4 | 294.6  | 17 491.5 |
| 1993          | 6 001.4 | 4 471.7 | 3 108.6 | 1 460.7 | 1 677.2 | 471.6 | 171.3 | 299.2  | 17 661.7 |
| 1994          | 6 055.7 | 4 486.7 | 3 185.3 | 1 466.1 | 1 702.6 | 472.9 | 174.0 | 301.3  | 17 847.4 |
| 1995          | 6 121.7 | 4 516.1 | 3 263.5 | 1 469.4 | 1 733.4 | 473.7 | 177.8 | 304.6  | 18 063.3 |
| 1996p         | 6 203.9 | 4 560.8 | 3 339.1 | 1 474.4 | 1 765.7 | 474.6 | 181.9 | 308.0  | 18 311.5 |

(a) Excludes Jervis Bay Territory from September 1993. (b) Includes Christmas Island and the Cocos (Keeling) Islands from September 1993.

Source: *Australian Demographic Statistics (3101.0)*.

The main factor changing the distribution of Australia's population is internal migration. In 1995–96, Queensland's population grew by about 76,000 people. About half of this growth was due to internal migration. However, Tasmania's population grew by only 900 people, as the natural increase in the State was largely offset by the net movement to the other States (see table 5.9).

Table 5.10 sets out the estimated resident population in the major population centres at 30 June 1986, 1991 and 1996. Of all the capital cities, Brisbane has had the highest level of population growth in the five years to 1996. As at 30 June 1996, there were 1.5 million people resident in Brisbane, an increase of 12.0% on 1991 figures. Perth and Darwin had the next highest population growth rates with increases of 8.9% and 7.4% respectively.

Other major population centres that have experienced significant population increases between 1991 and 1996 are the Sunshine Coast, Gold Coast–Tweed and Cairns (30.5%, 26.8% and 23.5% growth, respectively).

Between 1991 and 1996 Australia experienced an average population growth of 1.2% a year. However, the statistical local areas (SLAs) which experienced population growth covered less than half the area of the country.

There was very rapid growth along the east coast. Almost all SLAs there experienced

population growth. Most SLAs along the New South Wales and southern Queensland coasts increased their population density by more than 1 person per km<sup>2</sup>.

The areas with the most significant population increase were those on the outskirts of capital cities. These areas grew very rapidly over the period. As they were absorbed into the growing cities their population density changed from a low rural level to a much higher urban level.

Some areas of Australia have experienced significant population decline in recent years. The inner city areas in some States experienced population decline primarily because residential areas have been redeveloped for commercial uses. However, in some areas this decline has been slowed, or even reversed, by the influx of young people.

Surrounding the inner city areas are suburbs which developed in the post war period. These areas have declining population, primarily because most children in their twenties leave their parents' home (though later than 15 years ago).

There are also areas outside the capital cities with rapid population decline as local industries restructure. A notable example is Whyalla in South Australia. These changes in the distribution of the population are illustrated in map 5.11.

## 5.9 POPULATION GROWTH RATES

|                            | NSW   | Vic.  | Qld  | SA    | WA    | Tas.  | NT    | ACT(a) | Aust.(b) |
|----------------------------|-------|-------|------|-------|-------|-------|-------|--------|----------|
| Year ended 30 June         | %     | %     | %    | %     | %     | %     | %     | %      | %        |
| NATURAL INCREASE           |       |       |      |       |       |       |       |        |          |
| 1991                       | 0.81  | 0.80  | 0.86 | 0.61  | 1.00  | 0.71  | 1.74  | 1.23   | 0.83     |
| 1992                       | 0.75  | 0.76  | 0.86 | 0.59  | 0.92  | 0.68  | 1.77  | 1.19   | 0.79     |
| 1993                       | 0.76  | 0.75  | 0.85 | 0.58  | 0.88  | 0.66  | 1.69  | 1.16   | 0.78     |
| 1994                       | 0.72  | 0.73  | 0.83 | 0.54  | 0.86  | 0.65  | 1.68  | 1.10   | 0.75     |
| 1995                       | 0.69  | 0.70  | 0.80 | 0.54  | 0.86  | 0.62  | 1.65  | 1.08   | 0.73     |
| 1996p                      | 0.68  | 0.62  | 0.78 | 0.52  | 0.82  | 0.55  | 1.63  | 1.07   | 0.70     |
| NET OVERSEAS MIGRATION     |       |       |      |       |       |       |       |        |          |
| 1991                       | 0.63  | 0.54  | 0.34 | 0.32  | 0.66  | 0.09  | 0.38  | 0.15   | 0.51     |
| 1992                       | 0.53  | 0.42  | 0.28 | 0.20  | 0.47  | 0.01  | 0.29  | 0.01   | 0.40     |
| 1993                       | 0.21  | 0.18  | 0.12 | 0.11  | 0.28  | 0.02  | 0.27  | -0.20  | 0.17     |
| 1994                       | 0.37  | 0.24  | 0.17 | 0.14  | 0.40  | 0.04  | 0.24  | -0.14  | 0.26     |
| 1995                       | 0.59  | 0.43  | 0.33 | 0.20  | 0.62  | 0.07  | 0.27  | 0.04   | 0.45     |
| 1996p                      | 0.85  | 0.63  | 0.45 | 0.28  | 0.78  | 0.11  | 0.36  | 0.21   | 0.63     |
| NET INTERSTATE MIGRATION   |       |       |      |       |       |       |       |        |          |
| 1991                       | -0.29 | -0.34 | 1.02 | 0.11  | -0.11 | 0.18  | -0.70 | 1.04   | ..       |
| 1992                       | -0.26 | -0.48 | 1.29 | -0.01 | -0.09 | -0.07 | -0.96 | 0.58   | ..       |
| 1993                       | -0.32 | -0.64 | 1.78 | -0.32 | -0.02 | -0.33 | -0.83 | 0.55   | ..       |
| 1994                       | -0.23 | -0.71 | 1.58 | -0.24 | 0.22  | -0.46 | -0.88 | -0.05  | ..       |
| 1995                       | -0.25 | -0.56 | 1.41 | 0.45  | 0.29  | -0.57 | -0.20 | -0.06  | ..       |
| 1996p                      | -0.26 | -0.36 | 1.15 | -0.42 | 0.22  | -0.58 | 0.07  | -0.15  | ..       |
| NET MIGRATION GAIN         |       |       |      |       |       |       |       |        |          |
| 1991                       | 0.33  | 0.20  | 1.36 | 0.43  | 0.55  | 0.26  | -0.32 | 1.19   | 0.51     |
| 1992                       | 0.27  | -0.06 | 1.57 | 0.19  | 0.38  | -0.07 | -0.67 | 0.59   | 0.40     |
| 1993                       | -0.11 | -0.46 | 1.90 | -0.21 | 0.26  | -0.31 | -0.56 | 0.35   | 0.17     |
| 1994                       | 0.14  | -0.47 | 1.75 | -0.10 | 0.62  | -0.42 | -0.65 | -0.19  | 0.26     |
| 1995                       | 0.35  | -0.13 | 1.74 | -0.25 | 0.91  | -0.51 | 0.07  | -0.02  | 0.45     |
| 1996p                      | 0.59  | 0.26  | 1.59 | -0.14 | 1.00  | -0.47 | 0.43  | 0.06   | 0.63     |
| TOTAL POPULATION GROWTH(c) |       |       |      |       |       |       |       |        |          |
| 1991                       | 1.11  | 0.95  | 2.13 | 0.99  | 1.43  | 1.00  | 1.08  | 2.52   | 1.28     |
| 1992                       | 1.05  | 0.78  | 2.30 | 0.71  | 1.32  | 0.64  | 1.74  | 1.82   | 1.20     |
| 1993                       | 0.68  | 0.38  | 2.63 | 0.29  | 1.18  | 0.38  | 1.72  | 1.56   | 0.97     |
| 1994                       | 0.90  | 0.34  | 2.47 | 0.37  | 1.51  | 0.28  | 1.58  | 0.70   | 1.05     |
| 1995                       | 1.09  | 0.66  | 2.45 | 0.22  | 1.81  | 0.18  | 2.22  | 1.09   | 1.21     |
| 1996p                      | 1.34  | 0.99  | 2.32 | 0.34  | 1.86  | 0.18  | 2.30  | 1.14   | 1.37     |

(a) Excludes Jervis Bay Territory from September 1993. (b) Includes Christmas Island and the Cocos (Keeling) Islands from September 1993. (c) Differences between the total growth rate and the sum of natural increase and net migration rates arise from retrospective adjustments (which are made after each Census) to eliminate any intercensal discrepancy.

Source: Australian Demographic Statistics (3101.0).

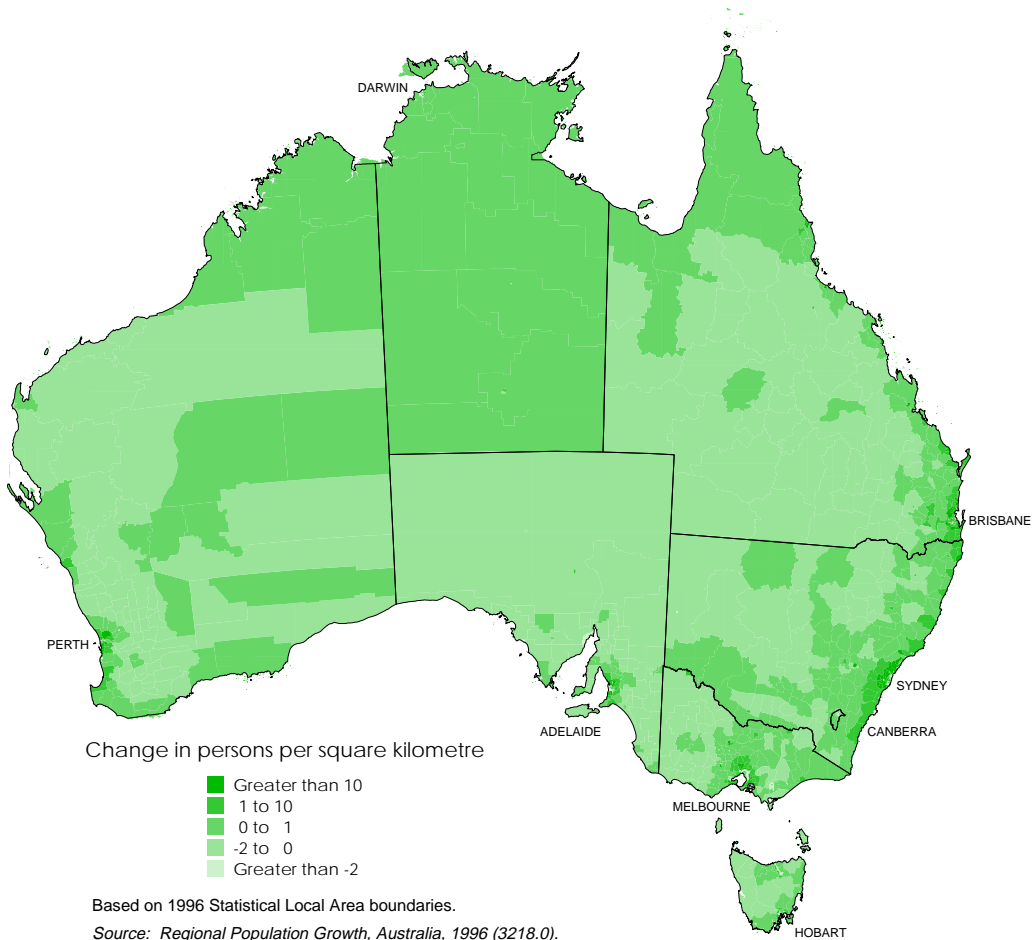
### 5.10 ESTIMATED RESIDENT POPULATION IN MAJOR POPULATION CENTRES, 30 June 1986, 1991 and 1996(a)

|                         | 1986    | 1991    | 1996p   |
|-------------------------|---------|---------|---------|
| Major population centre | '000    | '000    | '000    |
| Capital cities          |         |         |         |
| Sydney(b)               | 3 471.6 | 3 672.9 | 3 879.4 |
| Melbourne(b)            | 2 966.9 | 3 155.7 | 3 283.0 |
| Brisbane(b)             | 1 217.3 | 1 358.0 | 1 520.6 |
| Adelaide(b)             | 1 003.5 | 1 057.2 | 1 079.2 |
| Perth(b)                | 1 050.1 | 1 188.8 | 1 295.1 |
| Hobart(b)               | 182.1   | 190.7   | 195.8   |
| Darwin(b)               | 75.4    | 76.7    | 82.4    |
| Canberra(b)             | 257.4   | 288.2   | 307.7   |
| Other                   |         |         |         |
| Newcastle(c)            | 417.0   | 444.9   | 463.7   |
| Gold Coast–Tweed(c)     | 215.6   | 279.4   | 354.2   |
| Canberra–Queanbeyan(c)  | 287.3   | 321.2   | 344.8   |
| Wollongong(c)           | 233.0   | 244.9   | 255.7   |
| Sunshine Coast(c)       | 87.5    | 119.6   | 156.1   |
| Geelong(c)              | 146.4   | 151.9   | 152.4   |
| Townsville(c)           | 105.0   | 114.1   | 122.6   |
| Cairns(c)               | 74.2    | 86.3    | 106.6   |
| Launceston(c)           | 91.1    | 96.1    | 98.9    |
| Albury–Wodonga(c)       | 80.5    | 87.7    | 92.7    |
| Toowoomba City(d)       | 79.1    | 84.6    | 86.5    |
| Burnie–Devonport(c)     | 77.3    | 79.3    | 79.2    |
| Ballarat(c)             | 74.3    | 78.3    | 79.2    |
| La Trobe Valley(c)      | 79.7    | 79.2    | 75.5    |
| Bendigo(c)              | 66.7    | 72.1    | 74.3    |
| Bathurst–Orange(c)      | 64.6    | 68.8    | 71.7    |
| Rockhampton(c)          | 60.3    | 63.6    | 64.5    |
| Mackay(c)               | 50.9    | 54.5    | 61.0    |
| Coffs Harbour(e)        | 42.1    | 50.9    | 57.3    |
| Hastings(e)             | 41.2    | 49.4    | 57.3    |
| Wagga(e)                | 50.6    | 54.2    | 56.1    |
| Bundaberg(c)            | 43.9    | 49.3    | 54.0    |
| Greater Taree(e)        | 36.4    | 41.6    | 43.6    |
| Lismore(e)              | 37.5    | 42.2    | 43.5    |
| Shepparton(c)           | 38.4    | 40.1    | 41.2    |
| Mildura(c)              | 35.8    | 39.2    | 41.2    |
| Gladstone(c)            | 30.7    | 33.4    | 37.4    |
| Dubbo(e)                | 30.8    | 33.9    | 36.5    |
| Tamworth(e)             | 33.8    | 35.5    | 35.6    |
| Kalgoorlie/Boulder(e)   | 24.1    | 26.9    | 29.6    |

(a) Based on 1996 Statistical Local Area boundaries. (b) Capital City Statistical Division. (c) Statistical District. (d) Statistical Subdivision. (e) Statistical Local Area.

Source: *Australian Demographic Statistics (3101.0)*.

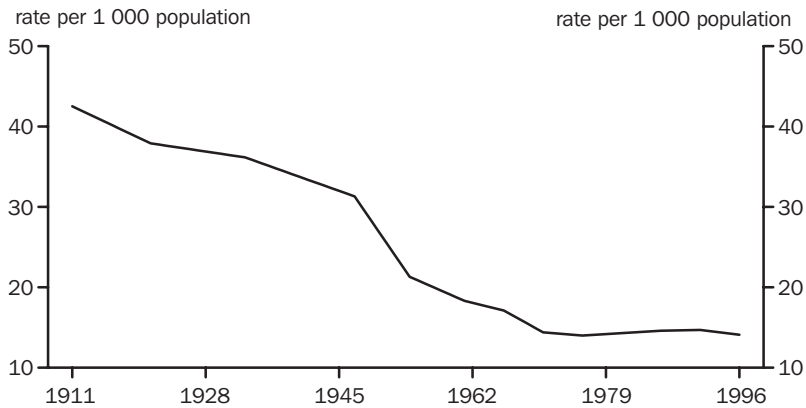
5.11 CHANGE IN POPULATION DENSITY, 1991 TO 1996



In 1911, 43% of Australians lived in rural areas. Since then this proportion fell steadily. By 1976, 14% of the population lived in rural areas. Between 1976 and 1991 this trend was reversed, and the proportion of people living in rural areas increased slightly (see graph 5.12). This was

mainly due to people moving to rural areas surrounding the cities, especially Melbourne and Sydney, but still working, shopping etc. in the city. However, the 1996 Census showed a slight drop in the proportion of people living in rural areas.

## 5.12 RURAL POPULATION



Source: Population census data.

### Age and sex of the population

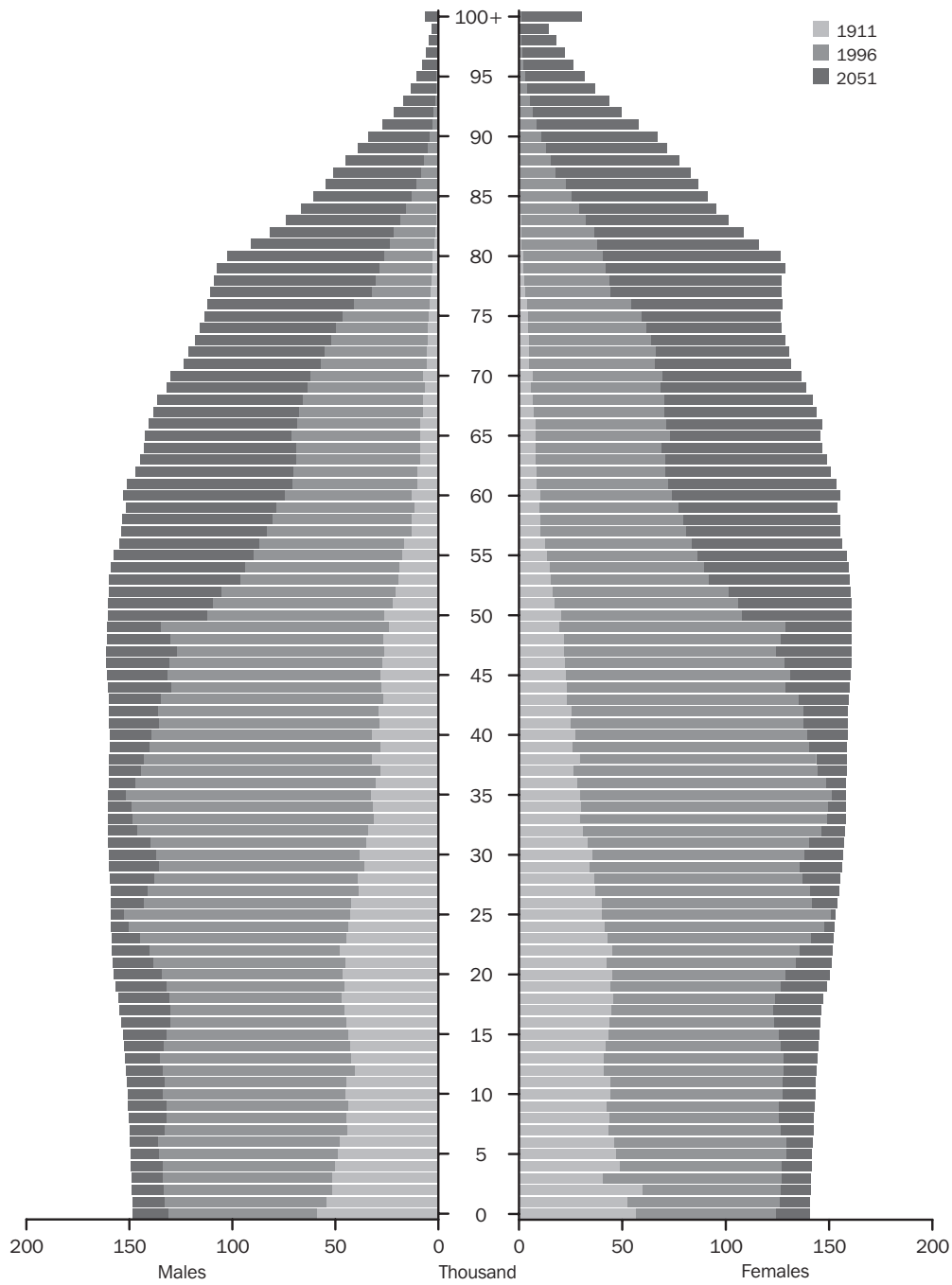
Since 1911 the population has grown significantly, but it has also aged. With Australians having smaller families, there has been a fall in the proportion of children. In 1911, about a quarter of the population were aged under 15. By 1996 this had fallen to around 21%, and by 2051 it is projected to fall to around 17%.

Conversely, the proportion of the population over 60 has increased markedly. At the turn of the century, 4% of the population were aged 65 or over. By 1996 this had increased to 12% and it is projected to reach around 23% by the middle of next century. The proportion of the population aged 85 and over is projected to increase from 1.1% in 1996 to 4.6% in 2051 (from

202,000 to 1.2 million people). These features are illustrated in graphs 5.13 and 5.14.

During the late 1980s and early 1990s the population aged 65 and over grew at around 50,000 people per year. In the next decade this rate of increase will fall to between 35,000 and 50,000, as the relatively small cohorts born in the Great Depression enter the age group. However, after 2008, the growth in this age group will increase rapidly. In one 12 month period of 2025–26, the population aged 65 years and over is projected to increase by 120,000, or 2.7%. In the decade to 2028, the population aged 65 and over is projected to increase by more than a million people, nearly a 30% increase. This represents the period when the largest group of baby boomers reaches retirement age.

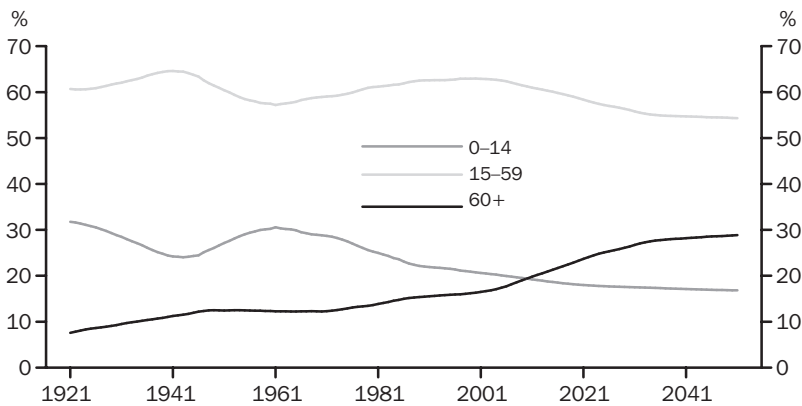
5.13 PROFILE OF AUSTRALIA'S POPULATION, 1911—2051



Source: *Australian Demography* (a CBC&S publication); *Australian Demographic Statistics* (3101.0); *Projections of the Populations of Australia, States and Territories* (3222.0).



5.14 PROPORTION OF POPULATION IN AGE GROUPS



Source: *Australian Demography* (a CBC&S publication); *Australian Demographic Statistics* (3101.0); *Projections of the Populations of Australia, States and Territories 1995–2051* (3222.0).

## Births, deaths and marriages

This section explores the issues of family formation and dissolution. It examines the structure of Australian families and the factors that change them, in particular births, deaths, marriages and divorces.

The numbers of births and deaths registered have both risen over the past 20 years, in line with population increases and the changing characteristics of the Australian population.

Trends in the numbers of marriages registered and divorces granted have fluctuated over the past two decades, although the number of marriages have tended to decrease, and the

number of divorces have tended to increase (see table 5.15). The 1976 peak in the number of divorces registered was largely due to the introduction of the Family Law Act during this year.

Fertility and mortality patterns have changed significantly over the past 50 years (see table 5.16). In 1978, Australia's total fertility rate fell below two babies per woman — below the population replacement level of 2.1 babies per woman — for the first time since records have been kept. It has remained there ever since. While there has been stability in the total fertility rate over the last two decades, the age of mothers and the proportion of births outside marriage have both increased significantly.

5.15 SUMMARY STATISTICS FOR BIRTHS, DEATHS, MARRIAGES AND DIVORCES

| Year | Live births | Deaths  | Registered marriages | Divorces |
|------|-------------|---------|----------------------|----------|
| 1976 | 227 810     | 112 662 | 109 973              | 63 230   |
| 1981 | 235 842     | 109 003 | 113 905              | 41 412   |
| 1986 | 243 408     | 114 981 | (a)114 913           | 39 417   |
| 1991 | 257 247     | 119 146 | 113 869              | 45 652   |
| 1992 | 264 151     | 123 660 | 114 752              | 45 729   |
| 1993 | 260 229     | 121 599 | 113 255              | 48 363   |
| 1994 | 258 051     | 126 692 | 111 174              | 48 312   |
| 1995 | 256 190     | 125 133 | 109 386              | 49 712   |
| 1996 | 253 834     | 128 719 | 106 103              | 52 466   |

(a) This figure was affected by late registrations in NSW.

Source: *Australian Demographic Trends* (3102.0); *Births, Australia* (3301.0); *Deaths, Australia* (3302.0); *Marriages and Divorces, Australia* (3310.0).

Australia has also experienced a decline in mortality and an associated increase in life expectancy. Females have a greater life expectancy than males. This difference has been attributed to both biological and environmental factors. Females are estimated to have a genetic advantage of about two years of life over males (Hugo 1986). The remaining difference can be attributed to different behavioural and lifestyle patterns. For example, males have higher death rates from accidents and smoking-related

diseases such as heart disease and cancer (Pollard 1986).

As shown in table 5.17, recent trends show that Australians are getting married later and are staying married longer. The median ages of brides and bridegrooms have increased from 22.5 and 25.3 years, respectively, in 1947 to 25.7 and 27.6 years in 1996. After a decrease following the introduction of the Family Law Act in 1976, the median age of divorcing couples has risen, along with the median duration of marriages.

#### 5.16 SELECTED SUMMARY MEASURES OF FERTILITY AND MORTALITY

| Year ended 31 December | Total fertility rate(b) | Female net reproduction rate(c) | Fertility<br>Percentage of ex-nuptial births(d) | Mortality<br>Life expectancy at birth(a) |          |
|------------------------|-------------------------|---------------------------------|-------------------------------------------------|------------------------------------------|----------|
|                        |                         |                                 |                                                 | Males                                    | Females  |
| 1947                   | 3.08                    | 1.42                            | —                                               | 66.07                                    | 70.63    |
| 1954                   | 3.19                    | 1.50                            | 4.0                                             | 67.14                                    | 72.75    |
| 1961                   | 3.55                    | 1.67                            | 4.0                                             | 67.92                                    | 74.18    |
| 1966                   | 2.88                    | 1.36                            | 5.1                                             | 67.63                                    | 74.15    |
| 1971                   | 2.87                    | 1.36                            | 7.4                                             | 68.10                                    | 74.80    |
| 1976                   | 2.06                    | 0.98                            | 9.3                                             | 69.56                                    | 76.56    |
| 1981                   | 1.94                    | 0.93                            | 10.1                                            | 71.23                                    | 78.27    |
| 1986                   | 1.87                    | 0.90                            | 13.2                                            | 72.74                                    | 79.20    |
| 1989                   | 1.84                    | 0.88                            | 16.8                                            | 73.32                                    | 79.60    |
| 1990                   | 1.91                    | 0.91                            | 20.2                                            | 73.87                                    | 80.06    |
| 1991                   | 1.85                    | 0.89                            | 21.9                                            | 74.40                                    | 80.39    |
| 1992                   | 1.89                    | 0.91                            | 23.0                                            | 74.46                                    | 80.40    |
| 1993                   | 1.87                    | 0.90                            | 24.0                                            | 74.99                                    | 80.86    |
| 1994                   | 1.85                    | 0.88                            | 24.9                                            | 75.04                                    | 80.94    |
| 1995                   | 1.82                    | p0.88                           | 26.6                                            | (e)74.95                                 | (e)80.84 |
| 1996                   | 1.80                    | 0.86                            | 27.4                                            | 75.22                                    | 81.05    |

(a) For Census years 1947 to 1986 figures are based on Official Life Tables calculated by the Australian Government Actuary. For years from 1986 to 1994 figures are based on life tables calculated by the ABS. These ABS life tables summarise mortality conditions prevailing for that year; the Actuary's life tables take into account mortality and related conditions for a three-year period (the Census year and the years before and after the Census), limiting the effects of short-term fluctuations. (b) The number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life. (c) The number of daughters a woman would bear if she was subject to current female age-specific fertility rates and to predetermined mortality rates. (d) Proportion of total live births. (e) Values for life expectancy at birth refer to the period 1993–95. The life tables were constructed jointly by the Australian Government Actuary and the ABS.

Source: *Australian Demographic Statistics* (3101.0).

## 5.17 SELECTED SUMMARY MEASURES OF MARRIAGES AND DIVORCES, Median Age

| Year ended<br>31 December | Marriages         |       |                  |       |             |      | Divorces                     |      |                                     |
|---------------------------|-------------------|-------|------------------|-------|-------------|------|------------------------------|------|-------------------------------------|
|                           | First marriage of |       | All marriages of |       | At marriage |      | At date decree made absolute |      | Median duration of marriage (years) |
|                           | Bridegroom        | Bride | Bridegroom       | Bride | Husband     | Wife | Husband                      | Wife |                                     |
| 1947                      | 25.3              | 22.5  | 26.0             | 23.0  | n.a.        | n.a. | n.a.                         | n.a. | n.a.                                |
| 1954                      | 25.0              | 22.0  | 25.6             | 22.6  | n.a.        | n.a. | 37.8                         | 34.5 | 11.6                                |
| 1961                      | 24.3              | 21.4  | 24.9             | 21.8  | 24.7        | 21.7 | 38.7                         | 35.9 | 12.6                                |
| 1966                      | 23.8              | 21.2  | 24.2             | 21.5  | 24.4        | 21.4 | 40.4                         | 36.9 | 13.9                                |
| 1971                      | 23.4              | 21.1  | 23.8             | 21.4  | 23.7        | 21.0 | 37.9                         | 34.4 | 12.5                                |
| 1976                      | 23.6              | 21.2  | 24.9             | 22.2  | 23.4        | 21.0 | 36.2                         | 33.1 | 11.0                                |
| 1981                      | 24.4              | 22.1  | 25.9             | 23.3  | 23.5        | 20.9 | 35.5                         | 32.8 | 10.2                                |
| 1986                      | 25.6              | 23.5  | 27.3             | 24.9  | 24.2        | 21.6 | 37.5                         | 34.7 | 10.6                                |
| 1989                      | 26.3              | 24.2  | 28.0             | 25.7  | 24.6        | 22.0 | 38.0                         | 35.1 | 10.2                                |
| 1990                      | 26.5              | 24.3  | 28.2             | 25.9  | 24.7        | 22.1 | 38.2                         | 35.3 | 10.1                                |
| 1991                      | 26.7              | 24.5  | 28.4             | 26.0  | 24.8        | 22.3 | 38.4                         | 35.5 | 10.3                                |
| 1992                      | 26.9              | 24.7  | 28.7             | 26.3  | 25.0        | 22.4 | 38.7                         | 35.9 | 10.5                                |
| 1993                      | 27.0              | 24.8  | 28.8             | 26.4  | 25.2        | 22.6 | 39.3                         | 36.4 | 10.7                                |
| 1994                      | 27.2              | 25.1  | 29.0             | 26.6  | 25.4        | 22.8 | 39.7                         | 36.8 | 10.9                                |
| 1995                      | 27.3              | 25.3  | 29.2             | 26.8  | 25.6        | 23.0 | 39.9                         | 37.1 | 11.0                                |
| 1996                      | 27.6              | 25.7  | 29.6             | 27.2  | 25.8        | 23.2 | 40.2                         | 37.4 | 11.0                                |

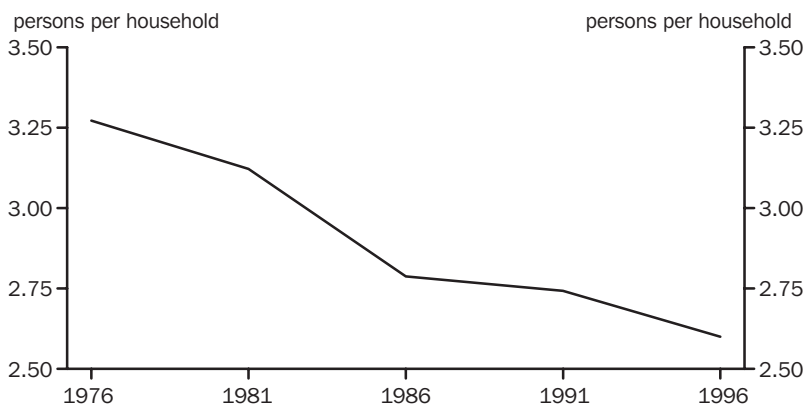
Source: Australian Demographic Statistics (3101.0); Marriages and Divorces, Australia (3310.0).

## Households and families

In 1996, there were an estimated 6,898,000 households in Australia. Over the past 20 years the average size of households has fallen significantly (see graph 5.18). The number of one person households has grown, due largely to the ageing of the population, as has the number of one parent families. Couples having smaller families have also contributed to the fall in household size.

In 1976, 60% of families were couples with children. By 1996, this had fallen to 51% (table 5.19). Part of this change can be attributed to the increase in one parent families with dependent children, but most of the change is due to the increase in the proportion of couple-only families. People are having children later in life, and are living longer. Therefore they are spending more time living in couple-only families, both before they have children and after their children have left home.

5.18 AVERAGE HOUSEHOLD SIZE



Source: Census of Population and Housing, 30 June 1981: Summary Characteristics of Persons and Dwellings, Australia (2443.0); Australian Demographic Statistics (3101.0); ABS, unpublished data.

5.19 FAMILY TYPE, 1976-96

|                                           | 1976  | 1981  | 1986  | 1991  | 1996  |
|-------------------------------------------|-------|-------|-------|-------|-------|
| Family type                               | %     | %     | %     | %     | %     |
| One parent family with dependent children | 6.5   | 8.6   | 7.8   | 8.8   | 10.1  |
| Couple only                               | 28.0  | 28.7  | 30.3  | 31.4  | 40.2  |
| Couple with dependent children            | 48.4  | 46.6  | 44.8  | 44.4  | 34.7  |
| Couple with non-dependent children only   | 11.1  | 10.0  | 10.9  | 9.5   | 8.8   |
| Other families                            | 5.9   | 6.0   | 6.2   | 5.9   | 6.3   |
| Total                                     | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: 1976-91: *Australian Social Trends*, 1994 (4102.0); 1996: ABS, unpublished *Census of Population and Housing* data.

However, children are leaving home later. In 1981, 34% of children aged 20-24 lived with their parents, by 1991 this had increased to 40%. This increase has, to some extent, countered the fall in the number of couples with non-dependent children only.

**Marriages**

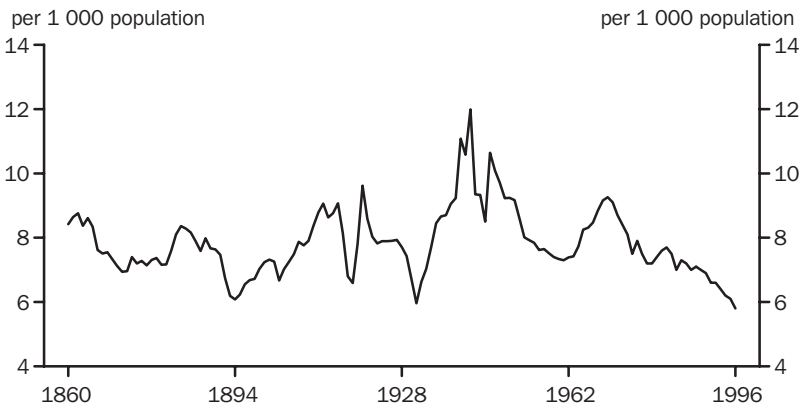
The crude marriage rate in Australia (the number of registered marriages or weddings per 1,000 population) has fluctuated since it was first recorded in the 1860s. Broadly, the crude marriage rate has followed the pattern of prevailing economic and social conditions. It has fallen in times of depression or recession, e.g. in the 1890s and 1930s, and increased in times of

prosperity such as the gold rush in the 1860s and the immediate post-war years of the early 1920s and late 1940s. Marriage rates have also generally increased during times of war. The 1996 crude marriage rate of 5.8 marriages per 1,000 of the population is the lowest on record, while the highest crude marriage rate was 12.0 per 1,000 in 1942.

The crude marriage rate has been declining since 1970. This decline in the marriage rate can be mainly attributed to changes in attitudes to marriage and living arrangements that have occurred since 1970.

The fluctuations in the crude marriage rate between 1860 and 1996 are shown in graph 5.20.

5.20 CRUDE MARRIAGE RATE



Source: *Australian Social Trends* (4102.0); *Marriages and Divorces, Australia* (3310.0).

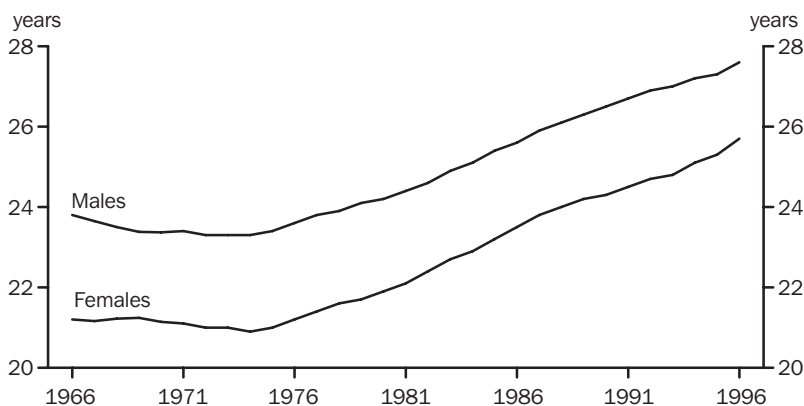
Between 1976 and 1996, the median age of brides entering their first marriage increased from 22.2 years to 27.2 years, while for grooms the median age at first marriage increased from 24.9 years to 29.6 years (graph 5.21). Part of this increase can be attributed to the increasing incidence of de facto relationships. Another factor is that young people are staying in education longer.

Traditionally, grooms have been older than their brides. However the difference between the median ages at marriage is slowly narrowing. In 1996 the difference between the median ages of

brides and grooms was 2.4 years, compared to 2.7 years in 1966 and 3.1 years in the period 1921–25.

In 73% of all marriages in 1995 the groom was older than the bride. However, there is a strong tendency for couples to be about the same age, with 38% of couples being within two years of each other, and only 9% being more than 10 years apart in age (graph 5.22). This tendency is much stronger for first marriages than for remarriages. In 45% of first marriages the couple are within two years of each other. For remarriages the proportion is only 23%.

5.21 MEDIAN AGE AT FIRST MARRIAGE



Source: Australian Social Trends (4102.0); Marriages and Divorces, Australia (3310.0).

5.22 AGE DIFFERENCE BETWEEN MARRYING COUPLES, 1995



Source: ABS, unpublished data on marriages.

### De facto marriages

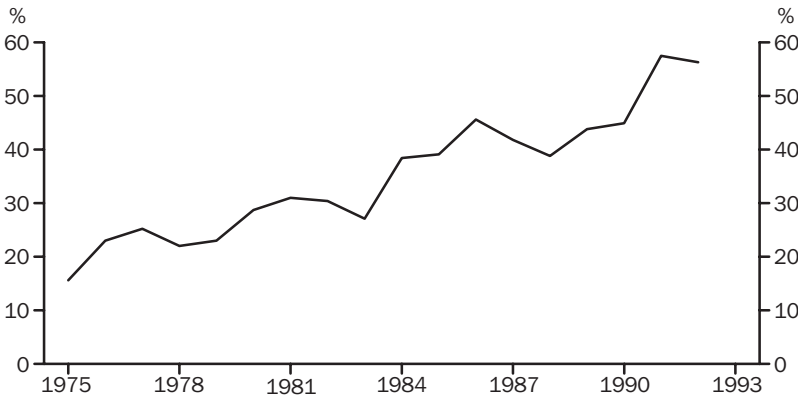
Most of the decrease in the crude marriage rate since 1970 can be attributed to the increasing incidence of de facto marriages. In 1992, 8% of all couples were in de facto marriages. The proportion was much higher among younger age groups; 40% of 20–24 year olds in a couple relationship were de factos.

De facto marriages may be a prelude to a registered marriage or an alternative to a registered marriage. Over half (56%) of the couples who married in 1992 lived together

before their marriage (graph 5.23). With 27% of babies born outside a registered marriage in 1996 (graph 5.24), many people seem to be choosing to form long term relationships and have children, with no intention of marrying.

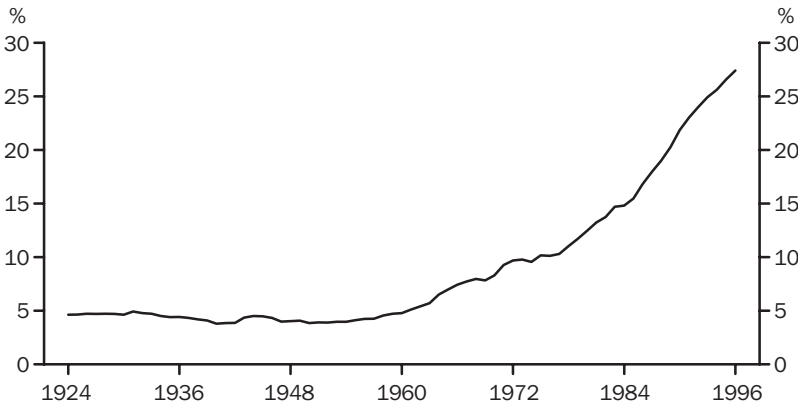
Some other forms of couple relationships are also classified as de facto relationships, for example a boyfriend and girlfriend who are living together, but do not regard their relationship as marriage-like. These de facto relationships may not be as stable or permanent as de facto marriages.

5.23 COUPLES COHABITING BEFORE MARRIAGE



Source: Australia's Families — Selected Findings from the Survey of Families in Australia (4418.0).

5.24 PROPORTION OF BIRTHS OUTSIDE MARRIAGE



Source: Births, Australia (3301.0).

## Divorces

The *Family Law Act 1975* allows only one ground for divorce: irretrievable breakdown of the marriage, measured as the separation of the spouses for at least one year. The implementation of this law resulted in a large increase in the divorce rate in 1976. The rate then declined until 1979 as the backlog of applications was cleared. Since then the crude divorce rate has fluctuated between 2.4 and 2.9 divorces per 1,000 population (see graph 5.25). The pattern of divorces per 1,000 married couples is very similar, although data are not available before 1981. In 1996 there were 12.9 divorces per 1,000 married couples.

About 43% of all marriages are likely to end in divorce; 8% within five years of marriage, 19% within ten years, 32% within twenty years and 39% within thirty years. Remarriages following divorce have the highest risk of divorce. The probability of divorce is slightly lower for first marriages and much lower for remarriages following widowhood.

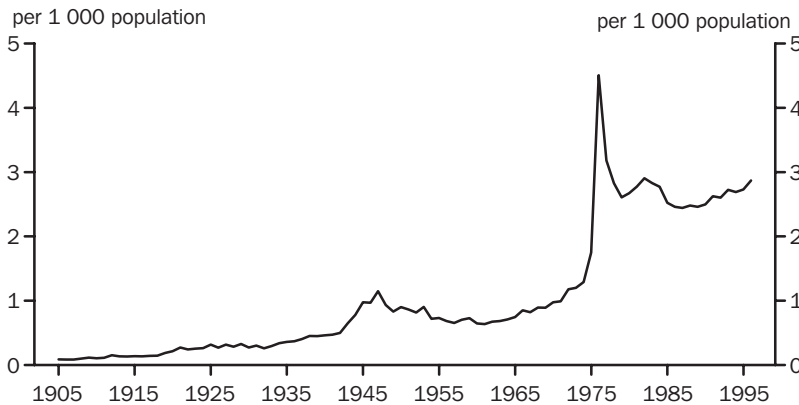
Couples are having children later in their marriage, and divorcing sooner. Therefore since 1975 the probability of divorce before the birth of the first child has increased, and the proportion of divorces involving children has decreased.

## Births

In 1903, when the crude birth rate was lower than it had ever been before, the Royal Commission On the Decline in the Birth-rate and On the Mortality of Infants in New South Wales was appointed. It reported in 1904 and concluded that '...the cause or causes of the Decline of the Birth-rate must be a force or forces over which the people themselves have control...'. In other words, couples were limiting the size of their families.

At the turn of the century there were 117 births per 1,000 women of child bearing age (15–44 years). This approximates a total fertility rate of 3.5 babies per woman. By 1924 the total fertility rate was 3.0 and falling.

5.25 CRUDE DIVORCE RATE



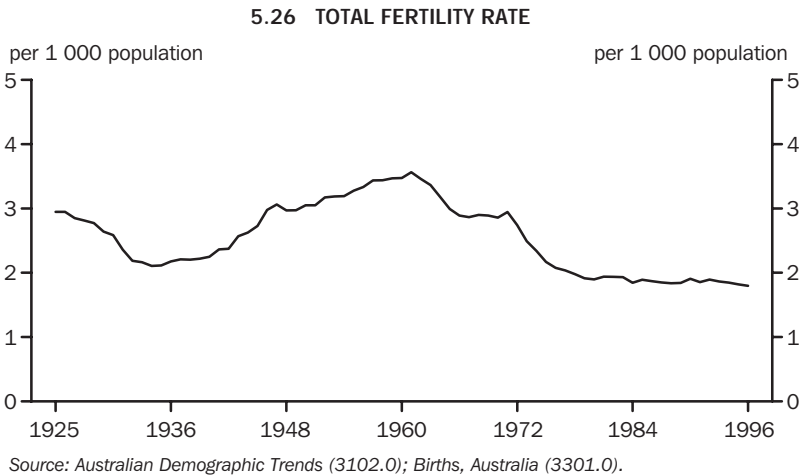
Source: Australian Demographic Trends (3102.0); Marriages and Divorces, Australia (3310.0).

In 1934, in the middle of the Great Depression, the total fertility rate fell to 2.1 babies per woman. It then increased during the second half of the Depression, as women who had deferred childbearing in the early years of the Depression began to have children. Fertility increased through World War II and the 1950s, and peaked in 1961 when the total fertility rate reached 3.6 babies per woman. This period of high fertility is known as the baby boom (see graph 5.26).

After the 1961 peak, the total fertility rate fell rapidly, to 2.9 babies per woman by 1966. This fall can be attributed to changing social attitudes, in particular a change in people's perception of desired family size, facilitated by the contraceptive pill becoming available.

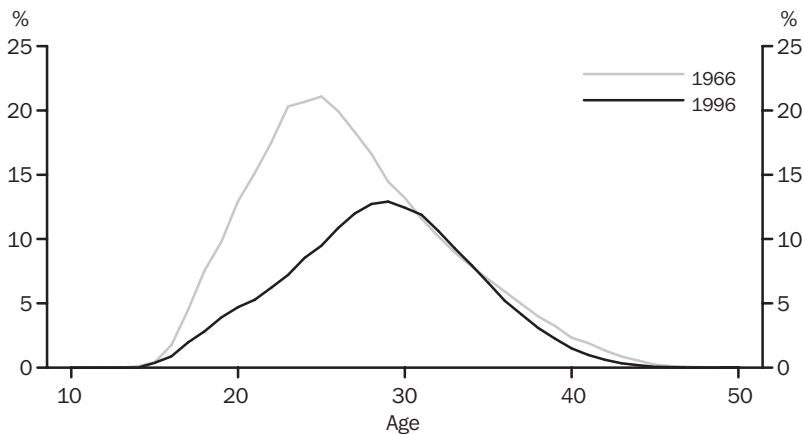
During the 1970s the total fertility rate dropped again, falling to below replacement level in 1976 where it has remained since. This fall was more marked than the fall in the early 1960s and has been linked to the increasing participation of women in the labour force, coupled with changing attitudes to family size, standard of living and lifestyle choices.

Women are starting childbearing later in life, and are having fewer children. In 1966, peak fertility was among 25 year old women, with 21% having babies. By 1996, peak fertility was among 29 year old women, but only 13% had babies. Primarily because fewer women are having large families, the proportion of all women having babies after they turn 40 has fallen (see graph 5.27).





5.27 PROPORTION OF WOMEN HAVING BABIES



Source: CBC&S, *Australian Demography*, 1966; *Births Australia* (3301.0); *Estimated Resident Population by Sex and Age, States and Territories of Australia* (3201.0).

In the last 30 years there has been a fall in the proportion of births to teenage mothers, from 11.3% of all births in 1966 to 4.9% in 1996. The number of babies born to mothers aged 40 years or over has also fallen, from 2.6% in 1966 to 2.1% in 1996.

## Deaths

In the period 1901–10 the average life expectancy of a new-born boy was 55 years and that of a new-born girl 59 years. By 1994–96, a new-born boy had a life expectancy of 75 years and a new-born girl 81 years. This represented an increase of 20 years for boys and 22 years for girls. Graph 5.28 shows the changes in life expectancy for males and females between 1905 and 1994–96.

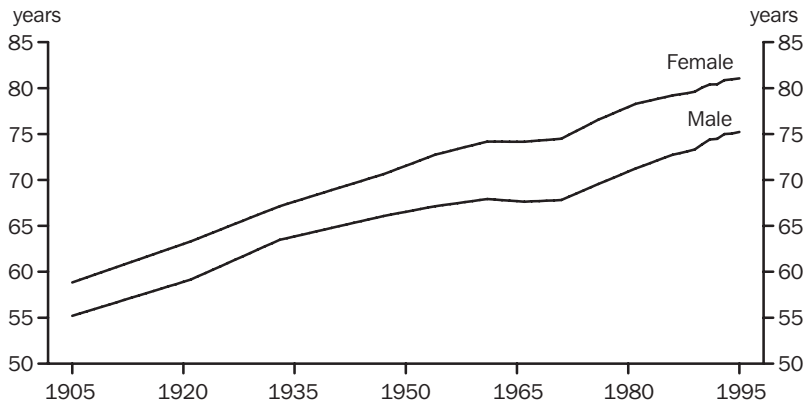
The increase in life expectancy is mainly due to fewer deaths of young children, particularly in the first year of life (infant mortality). The high mortality rates among infants during the period 1901–10 (about 1 in 10 died in the first year of life) kept the average life expectancy at birth low. Children who survived these early years then had life expectancies nearer to those currently experienced. For example, the life expectancy of a five year old boy improved by 13 years between 1901–10 and 1994–96 compared to 20 years improvement for a new-born boy.

The reduction in mortality in the early part of this century is attributed to improvements in living conditions, such as better water supplies, sewage systems, food quality, and health education. The continuing reduction in mortality in the latter half of the century is attributed to improving social conditions and advances in medical technology such as mass immunisation and antibiotics.

The past two decades in particular have seen further increases in life expectancy. These increases are due in part to lower infant mortality, fewer deaths among young adults from motor vehicle accidents and fewer deaths among older men from heart disease. The reduction in the number of deaths from heart disease is related to behavioural changes, such as dietary improvements, reduced smoking and increased fitness.

Australians have an average life expectancy which compares well with that experienced in other developed nations. Among the countries shown in table 5.29, the life expectancy at birth of Australian males and females (75 and 81 years respectively) was exceeded by that in Japan. Life expectancy in Australia was greater than in Canada, Greece, Italy, New Zealand, the United Kingdom and the United States. Life expectancy in Australia was also greater than experienced in developing nations.

5.28 LIFE EXPECTANCY AT BIRTH



Source: Australian Social Trends 1995 (4102.0); Deaths, Australia (3302.0).

5.29 LIFE EXPECTANCY AT BIRTH, Selected Countries

| Country                  | year    | Males | Females |
|--------------------------|---------|-------|---------|
|                          |         | years | years   |
| Australia                | 1994-96 | 75.2  | 81.0    |
| Canada                   | 1985-87 | 73.0  | 79.8    |
| China                    | 1990-95 | 66.7  | 70.4    |
| France                   | 1991    | 72.9  | 81.1    |
| Greece                   | 1990-91 | 74.6  | 80.0    |
| Hong Kong                | 1993    | 75.2  | 80.7    |
| Indonesia                | 1990-95 | 61.0  | 64.5    |
| Italy                    | 1989    | 73.5  | 80.0    |
| Japan                    | 1993    | 76.2  | 82.5    |
| Korea (Republic of)      | 1991    | 67.7  | 75.7    |
| Malaysia                 | 1990-95 | 68.7  | 73.0    |
| New Zealand              | 1990-92 | 72.9  | 78.7    |
| Papua New Guinea         | 1990-95 | 55.2  | 56.7    |
| Singapore                | 1993    | 74.0  | 78.3    |
| Sweden                   | 1993    | 75.5  | 80.8    |
| United Kingdom           | 1992    | 73.5  | 79.1    |
| United States of America | 1991    | 72.0  | 78.9    |
| Viet Nam                 | 1990-95 | 62.9  | 67.3    |

Source: Deaths, Australia (3302.0); United Nations 1996.

The standardised death rate removes the effect of different age structures from the crude death rate. Over the last 20 years, the standardised death rate in Australia has fallen by 33%, from 10 to 6 deaths per 1,000 population (see table 5.30).

The Northern Territory has had the highest standardised (and crude) death rate in the

country for the last two decades. This can largely be attributed to high death rates among the Indigenous population. In 1996, Indigenous persons made up 27% of the Northern Territory population, but accounted for 43% of its deaths.

The Australian Capital Territory had the lowest standardised death rate in 1996, 5% below the national rate.

## 5.30 STANDARDISED DEATH RATES

| State/Territory              | 1976  |         |         | 1986  |         |         | 1996  |         |         |
|------------------------------|-------|---------|---------|-------|---------|---------|-------|---------|---------|
|                              | Males | Females | Persons | Males | Females | Persons | Males | Females | Persons |
| New South Wales              | 13.1  | 7.7     | 9.8     | 10.2  | 6.1     | 7.8     | 8.3   | 5.0     | 6.4     |
| Victoria                     | 12.9  | 7.6     | 9.6     | 9.7   | 5.8     | 7.5     | 8.1   | 5.0     | 6.3     |
| Queensland                   | 12.8  | 7.5     | 9.6     | 9.6   | 5.7     | 7.4     | 8.1   | 4.9     | 6.4     |
| South Australia              | 12.1  | 7.1     | 9.0     | 9.5   | 5.6     | 7.2     | 8.1   | 4.9     | 6.3     |
| Western Australia            | 11.9  | 6.9     | 8.9     | 9.9   | 5.7     | 7.5     | 8.1   | 4.9     | 6.3     |
| Tasmania                     | 13.4  | 8.2     | 10.2    | 10.0  | 6.5     | 8.1     | 9.2   | 5.6     | 7.2     |
| Northern Territory           | 15.5  | 13.4    | 14.2    | 12.0  | 8.2     | 10.2    | 10.5  | 7.1     | 8.8     |
| Australian Capital Territory | 12.5  | 6.7     | 8.8     | 9.7   | 6.2     | 7.7     | 7.8   | 4.9     | 6.1     |
| Australia                    | 12.8  | 7.6     | 9.6     | 9.9   | 5.9     | 7.6     | 8.2   | 5.0     | 6.4     |

Source: Deaths, Australia (3302.0).

## Australia's cultures

Australia has a rich cultural diversity. *Chapter 12, Culture and recreation* discusses the range of cultural activities in Australia.

At the 1996 Census 3.9 million people had been born overseas in one of over 200 countries. A further 3.8 million had one or both parents born overseas. There were 2.6 million people who spoke a language other than English at home. The 1996 Census classified 92 religious denominations as well as 282 major languages, including 170 Aboriginal and Torres Strait Islander languages.

## The Aboriginal and Torres Strait Islander population

There are no accurate estimates of the population of Australia before European settlement. Many estimates were based on post-1788 observations of a population already reduced by introduced diseases and other factors. In 1930, the anthropologist Radcliffe-Brown postulated a minimum figure of 300,000. In 1980, L.R. Smith estimated the absolute minimum pre-1788 population at 315,000. Other estimates have put the figure at over 1 million, while recent archaeological finds suggest that a population of 750,000 could have been sustained.

Whatever the size of the Indigenous population before European settlement, it declined dramatically under the impact of new diseases, repressive and often brutal treatment, dispossession, and social and cultural disruption and disintegration (*Year Book Australia, 1994*). The decline of the Indigenous population continued well into the twentieth century.

In the last 20 years, changing social attitudes, political developments, improved statistical coverage, and a broader definition of Indigenous origin have all contributed to the increased likelihood of people identifying as being of Aboriginal or Torres Strait Islander origin. This is reflected in the large increases in the number of Indigenous people counted in each Census, increases in excess of those which can be attributed to natural increase in the Indigenous population. Table 5.31 shows the distribution of the Indigenous population in 1991 and 1996. The number of Indigenous Australians is displayed in graph 5.34 of the article later in this section. For these estimates the counts in the censuses before 1966 was augmented by estimates of the number of traditional Aboriginal people intentionally excluded from the census counts.

5.31 ESTIMATES OF THE INDIGENOUS POPULATION, At 30 June

| State/Territory              | 1991(a) |       | 1996(b) |       |
|------------------------------|---------|-------|---------|-------|
|                              | no.     | %     | no.     | %     |
| New South Wales              | 75 020  | 26.5  | 106 294 | 28.6  |
| Victoria                     | 17 890  | 6.3   | 22 574  | 6.1   |
| Queensland                   | 74 214  | 26.2  | 100 504 | 27.0  |
| South Australia              | 17 239  | 6.1   | 21 271  | 5.7   |
| Western Australia            | 44 182  | 15.6  | 54 055  | 14.5  |
| Tasmania                     | 9 461   | 3.3   | 14 651  | 3.9   |
| Northern Territory           | 43 754  | 15.4  | 49 566  | 13.3  |
| Australian Capital Territory | 1 616   | 0.6   | 2 952   | 0.8   |
| Australia                    | 283 560 | 100.0 | 372 052 | 100.0 |

(a) Estimate based on the 1991 Census of Population and Housing. (b) Estimate based on the 1996 Census of Population and Housing.

Source: *Experimental Projections, Aboriginal and Torres Strait Islander Population, June 1991–June 2001 (3231.0)*; *Population Distribution, Indigenous Australians (4705.0)*.

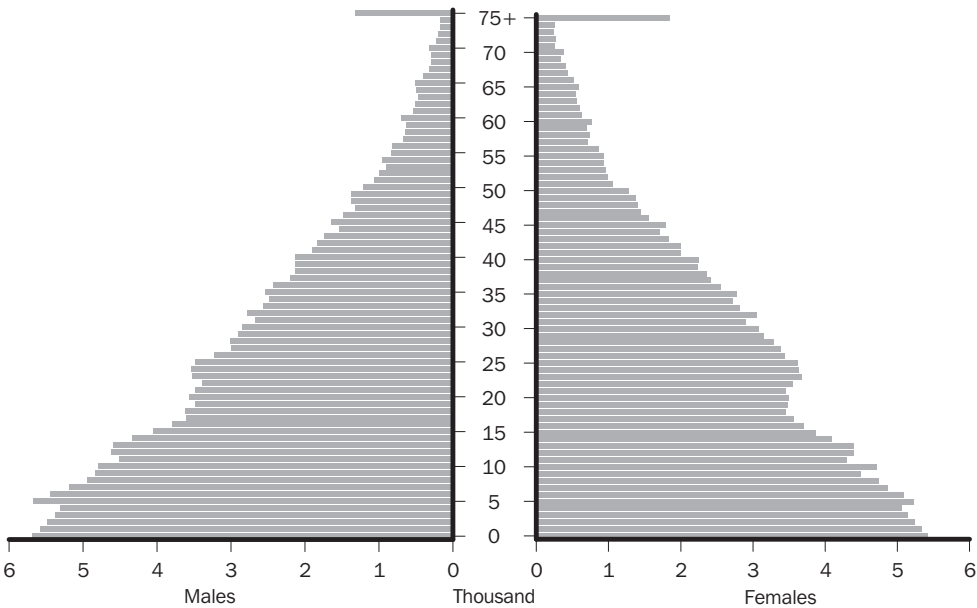
The Indigenous population has a very young age structure (graph 5.32). With 40% of the population aged under 15, and 3% aged over 65, it has a younger age structure than that of the total Australian population at the beginning of this century.

This age structure is largely a product of high fertility rates. During the 1960s Indigenous women had, on average, about six children each.

By the 1980s this had fallen to about three children each, compared to 1.9 for all Australian women.

The age structure also reflects high death rates. For the period 1991–96, life expectancy of Aboriginal and Torres Strait Islander people at birth was about 57 years for males and 66 years for females.

5.32 AGE STRUCTURE OF THE INDIGENOUS POPULATION, Preliminary Estimates, 1996



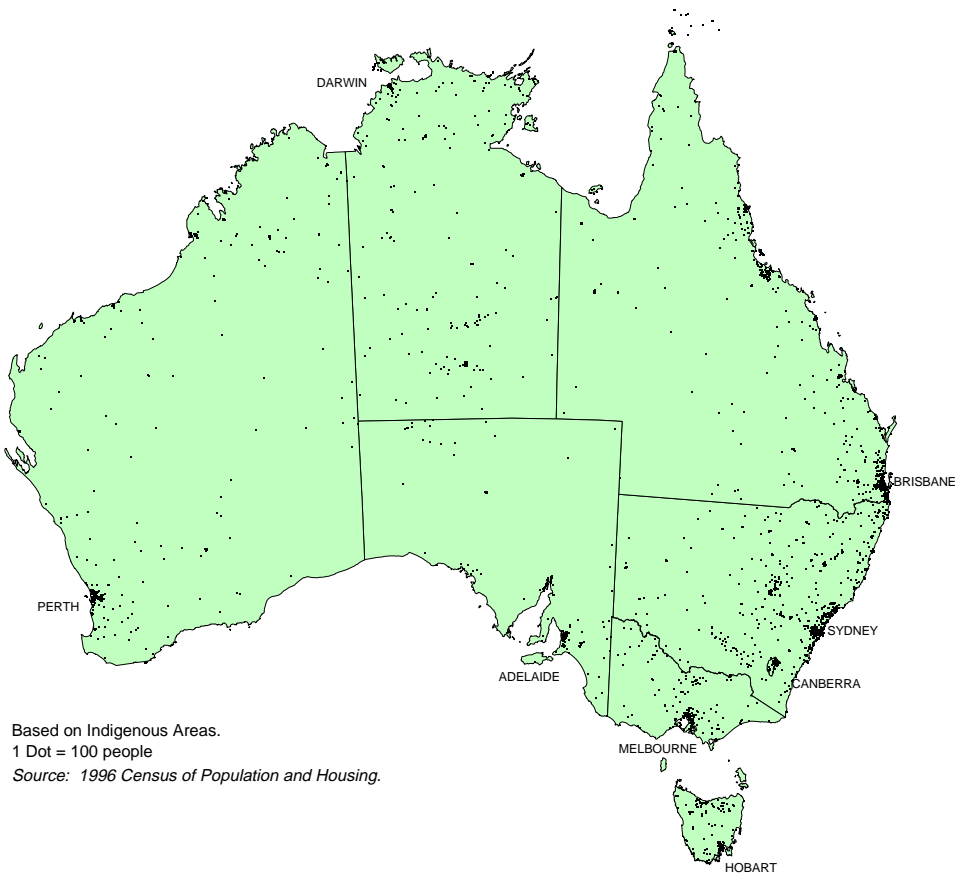
Source: ABS, unpublished Estimated Resident Population data.

While most of the total population is concentrated along the east and (to a lesser extent) the south west coasts, the Indigenous population is much more widely spread. About 90% of Australia's total population are contained within the most densely settled 2.6% of the continent. About 90% of the Indigenous population live in areas covering 25% of the continent. This partly reflects the higher level of urbanisation among the non-Indigenous population than the Indigenous population. However, Indigenous people are also much more likely to live in very remote areas than the

rest of the population. Just over half of the continent contains 0.3% of the total population, and 3.1% of the Indigenous population (see maps 5.7 and 5.33).

While areas with a high density of Indigenous population also tend to have a high density of total population, it is important to recognise that the areas with the highest concentrations of Indigenous and total populations are not necessarily the same areas. The area with the highest concentration of Indigenous people is in Darwin, while the areas with the highest total population density are in Sydney and Melbourne.

### 5.33 DISTRIBUTION OF INDIGENOUS POPULATION, 1996



## The Aboriginal and Torres Strait Islander population of Australia — Census counts, concepts and questions in the 20th century

From the time of Federation until the 1967 Constitutional Referendum a question on people's race was asked in all Australian censuses. Data collected from this question allowed persons with more than 50% Aboriginal 'blood' to be excluded from official population figures. Since the Referendum the race question has been rephrased in terms of 'origin', first as 'racial origin' for the two censuses immediately following the Referendum, but subsequently the words 'race' or 'racial' have not been used at all. Instead, a question has been used which asks specifically whether a person is '...of Aboriginal or Torres Strait Islander origin'. Within these sets of questions there have been minor variations to the wording and format of questions.

The number of Indigenous Australians enumerated in censuses by these questions, augmented in the censuses before 1966 by estimates of the number of traditional Aboriginal people intentionally excluded from the census counts, is shown in graph 5.34. Up to the time of the Referendum, numbers were fairly static, varying between 80,000 and 100,000. Censuses immediately following the Referendum saw the start of a period of substantial increases in the number of enumerated Indigenous Australians. These increases have continued to this day, with the greatest rate of increase being between the last two censuses (1991–1996).

The 1967 Referendum ushered in a major change in the way Aboriginal and Torres Strait Islander people were viewed in Australian society. Census questions are constructed to reflect the society in which they are asked. Thus, prior to the Referendum one intent of the question (and a constitutional requirement, see below) was to allow for the exclusion of persons with more than 50% Aboriginal 'blood' from the Census counts. In the censuses after the Referendum, a shift in societal attitudes can be seen by the dropping of 'race' or 'racial' from the questions, and terms such as 'half-caste' and 'full blood' from the explanatory notes on the questions. The resulting 'origin'-based question is more inclusive than previous questions. As the position of Aboriginal and Torres Strait Islander

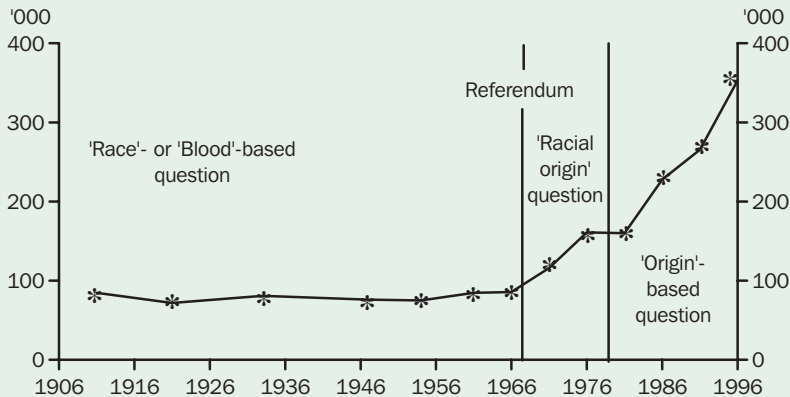
people has changed, there has been a corresponding change in the way the Census question is viewed and answered. Since 1967 more and more Indigenous people have responded affirmatively to a question about their origins. This movement has grown in recent censuses, and the Census question is seen by some respondents not just as a question about ancestral origins but also, or even alternatively, as about cultural identification.

### Exclusion before 1967

Prior to 1967, the Australian Constitution provided that 'in reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted' (s. 127). As this was an exclusory provision of the Constitution it was interpreted narrowly, so that 'Aboriginal' was taken to mean persons with more than 50% Aboriginal 'blood' (ALRC 1986, p. 69). Census questions based on race were used to establish the number of people satisfying this criterion, usually referred to as more than 'half-castes'. As counting of 'full-bloods' was not a prime purpose of the Census, remote areas of Australia which were very largely uninhabited by non-Aboriginal people were not enumerated. Thus early Aboriginal counts were sometimes modified in recognition of this. For example, the 1966 Census Summary of Characteristics for the Aboriginal Population states:

'Prior to the 1966 Census Aborigines "out of contact" were not enumerated and estimates of these were made by authorities responsible for native welfare. It is estimated that at the 1954 Census 12,956 Aborigines (of which 2,311 were estimated to be in Queensland, 1,760 in South Australia, 3,516 in Western Australia, and 5,369 in the Northern Territory) were not contacted by Census collectors and were not included in the Census. Increasing numbers however, were coming into contact and at the 1961 Census it is estimated that 2,000 Aborigines in Western Australia and 1,944 in the Northern Territory were not contacted by Census collectors. At the 1966 Census, efforts were made to obtain complete coverage.' (CBC&S 1969, p. 4).

5.34 INDIGENOUS COUNTS (PLUS AUGMENTED ESTIMATES), CENSUSES 1911–1996



Notes: (a) Asterisk denotes the Census years. The first Population Census was held in 1911. Thereafter, Censuses were held in 1921, 1933, 1947, 1954, 1961, 1966, 1971, 1976, 1981, 1986, 1991 and 1996. (b) Torres Strait Islanders were considered to be non-Aboriginal for the 1947, 1954 and 1961 Censuses.

Source: Smith L.R., 1980. *The Aboriginal Population of Australia*; ABS, unpublished data, Census counts 1981–1996.

### The 1967 Constitutional referendum

The main source of Commonwealth legislative power is s. 51 of the Constitution. The 1967 Referendum altered s. 51(26) to remove the exclusion of the 'aboriginal race' from the Commonwealth's powers to make special laws for people of any race.

As a result of the 1967 Referendum, the words 'aboriginal person' no longer appeared in the Constitution, and the Commonwealth acquired a power to legislate for the 'aboriginal race' which was previously held solely by the States. In this new context, government policy-makers and agencies were free to reflect societal attitudes in developing new definitions of Aboriginal and Torres Strait Islander. Further, it was no longer necessary to have an exclusory concept of 'aboriginal' and the way was open to move towards a more inclusive definition. This factor, combined with the changing societal values, resulted in the evolution of the 'origin' based Census questions.

### The Commonwealth working definition

The process of developing the well known and widely accepted 'Commonwealth working

definition' of Aboriginal or Torres Strait Islander commenced immediately after the Referendum. This definition states that 'An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives.' (DAA 1981, p. 1).

One of the earliest references to a definition close to the Commonwealth working definition was in May 1968 when the then Minister for Aboriginal Affairs defined an Aboriginal person as 'a person of whole or partial Aboriginal descent, who claims to be an Aboriginal and is accepted as such by the community with which he is associated'. Torres Strait Islanders were included in the definition in 1972. During the period 1973 to 1978 an extension to include South Sea Islanders was considered and rejected. Finally, in October 1978, the Commonwealth working definition was endorsed by Federal Cabinet. (DAA 1981, pp. 6-8).

**The current ABS standard for Indigenous status**

In 1995, the ABS adopted a formal standard for 'Indigenous status' (figure 5.35). This standard is based on a nominal definition equivalent to the Commonwealth working definition. However, its operational definition is 'origin' based. This standard question was first used in the 1996 Census. Although it is based on the descent element of the Commonwealth definition, Torres Strait Islanders

The history of the enumeration of Torres Strait Islanders is also varied. Prior to the 1947 Census, Torres Strait Islanders were regarded as Aboriginal and were treated in the same way in the Census with the same approach to people with more than 50% Torres Strait Islander 'blood'. In the 1947 Census, Torres Strait Islanders were considered to be Polynesian and were included in official counts; in the 1954 and 1961 Censuses they were considered to be Pacific Islanders and were again included in official counts. For the 1966 Census, however, Torres Strait Islanders were classified as Aboriginal and were excluded from official figures (ABS 1993).

**References**

ALRC      Australian Law Reform Commission.

CBC&S    Commonwealth Bureau of Census and Statistics.

DAA      Department of Aboriginal Affairs.

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Smith, L.R., 1980. *The Aboriginal Population of Australia*, Canberra, Australian National University Press.

**5.35 THE ABS STANDARD QUESTION**

|                                                                                                                                                                                                                     |                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Is the person of Aboriginal or Torres Strait Islander origin?</b></p> <ul style="list-style-type: none"><li>For persons of both Aboriginal or Torres Strait Islander origin, mark both 'Yes' boxes.</li></ul> | <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes, Aboriginal</p> <p><input type="checkbox"/> Yes, Torres Strait Islander</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|

**Migration**

Overseas migration plays an important role in changes in the population. Between 1991 and 1996, 1.1 million people arrived in Australia intending to stay for one year or more (table 5.36). This includes permanent (settler) arrivals, Australian residents returning from an overseas

trip of 12 months or more, and overseas visitors intending to stay 12 months or more in Australia. About 724,000 people left Australia for overseas on a permanent or long-term basis, including Australian residents emigrating or going overseas for 12 months or more, and overseas visitors leaving Australia after staying for 12 months or more.



## 5.36 PERMANENT AND LONG-TERM MIGRATION

|                                    | Five years ended 30 June |         |           |           |
|------------------------------------|--------------------------|---------|-----------|-----------|
|                                    | 1981                     | 1986    | 1991      | 1996      |
|                                    | no.                      | no.     | no.       | no.       |
| <b>Arrivals</b>                    |                          |         |           |           |
| Permanent (settlers)               | 402 716                  | 449 953 | 645 238   | 440 056   |
| Long-term                          |                          |         |           |           |
| Australian residents               | 297 286                  | 266 360 | 275 228   | 366 383   |
| Overseas visitors                  | 152 046                  | 162 012 | 244 446   | 340 107   |
| Permanent and long-term arrivals   | 852 047                  | 878 325 | 1 164 912 | 1 146 546 |
| <b>Departures</b>                  |                          |         |           |           |
| Permanent departures               | 114 626                  | 108 497 | 121 034   | 139 925   |
| Long-term                          |                          |         |           |           |
| Australian residents               | 286 108                  | 244 406 | 286 269   | 336 053   |
| Overseas visitors                  | 98 140                   | 118 533 | 169 380   | 247 925   |
| Permanent and long-term departures | 498 875                  | 471 438 | 576 681   | 723 903   |
| Category jumping                   | 17 689                   | 17 687  | 55 389    | -82 130   |
| Net overseas migration             | 370 865                  | 424 577 | 643 618   | 340 513   |

Source: *Migration, Australia* (3412.0).

Because population estimates include permanent and long-term movers and exclude short-term movers, adjustments are required for the net effect of changes in travel intention from short-term to permanent/long-term and vice versa. For example, an Australian resident may state on departure an intention to stay abroad for less than 12 months (a short-term movement). If this resident remains overseas for 12 months or more, he or she has changed their travel category to long-term and is regarded as a category jumper. Estimates for category jumping ensure that the estimated population truly reflects the usual resident population at any point in time.

Over the last 30 years there has been a significant change in the source countries of settlers. In the early 1960s the top six countries of birth represented 81% of all settler arrivals to Australia, including 49% born in the United Kingdom and Ireland. In the early 1990s 45% came from the top six countries, with 12% born in the United Kingdom and Ireland (see table 5.37).

In 1995–96, 99,000 people arrived in Australia intending to settle (table 5.38). The majority of these (67.6%) arrived as part of the migration program. Another 14% arrived as part of the humanitarian program, while 16% were eligible to settle in Australia because of their New Zealand citizenship. The remaining 2% were in other categories such as overseas-born children of Australian citizens.

## 5.37 BIRTHPLACE OF SETTLER ARRIVALS

| Country                    | '000  | %    |
|----------------------------|-------|------|
| <b>1962–66</b>             |       |      |
| United Kingdom and Ireland | 305.8 | 49.2 |
| Greece                     | 71.3  | 11.5 |
| Italy                      | 62.3  | 10.0 |
| Yugoslavia                 | 29.3  | 4.7  |
| Malta                      | 19.7  | 3.2  |
| Germany                    | 16.7  | 2.7  |
| <b>1972–76</b>             |       |      |
| United Kingdom and Ireland | 184.7 | 40.9 |
| Yugoslavia                 | 23.5  | 5.2  |
| New Zealand                | 16.9  | 3.7  |
| Lebanon                    | 15.3  | 3.4  |
| USA                        | 14.5  | 3.2  |
| Greece                     | 14.0  | 3.1  |
| <b>1982–86</b>             |       |      |
| United Kingdom and Ireland | 94.1  | 21.2 |
| New Zealand                | 47.4  | 10.7 |
| Viet Nam                   | 42.2  | 9.5  |
| Philippines                | 17.3  | 3.9  |
| South Africa               | 13.1  | 2.9  |
| Poland                     | 12.4  | 2.8  |
| <b>1992–96</b>             |       |      |
| United Kingdom and Ireland | 52.2  | 12.2 |
| New Zealand                | 47.0  | 11.0 |
| China                      | 27.0  | 6.3  |
| Hong Kong                  | 25.9  | 6.1  |
| Viet Nam                   | 20.1  | 4.7  |
| Philippines                | 19.3  | 4.5  |

Source: *Australian Demography* (a CBC&S publication); *Overseas Arrivals and Departures, Australia* (3401.0).

The number of visas issued to prospective settlers varies significantly from year to year, depending largely on the relative economic and political climate in Australia and source countries. So too does the balance between the types of visas issued. Skilled migration is a very volatile component of the migration intake. Table 5.38 shows that, in the six years to 1995–96, the skilled migration category ranged from 39.8% of settler arrivals in 1990–91 and 37.6% in 1991–92, to 20.2% four years later. In 1995–96, 29% of skilled immigrants came from Europe, especially the United Kingdom and Ireland. North East Asia and Southern Asia also contributed a high proportion of skilled immigrants to Australia, with 26% and 15% of the total intake respectively. Sub-Saharan Africa contributed about 11% of skilled immigrants to Australia, representing 41% of all immigrants from the region.

In 1995–96, 47% of settlers came as part of the family component of Australia's immigration

program. The birthplaces of these immigrants partly reflect past migration patterns. About 27% were born in North East Asia, with another 25% born in Europe.

Of settlers arriving as part of the humanitarian program, 49.5% come from Europe, mostly the Former Yugoslav Republics (45.0%). Nearly a quarter of immigrants on humanitarian visas had been born in North Africa and the Middle East.

Permanent migrants tend to have higher level occupations than the Australian population. This is true for both immigrants and emigrants. In 1995–96, 14% of the employed population were professionals, as against 30% of permanent emigrants who stated an occupation (table 5.39). This would appear to reflect a 'brain drain' of skilled workers out of the country. However, settler arrivals had a similar range of occupations to emigrants, and in 1995–96 there were almost three times as many settler arrivals as emigrants.

**5.38 SETTLER ARRIVALS, By Eligibility Category**

|                      | 1990–91        | 1991–92        | 1992–93       | 1993–94       | 1994–95       | 1995–96       |
|----------------------|----------------|----------------|---------------|---------------|---------------|---------------|
| Eligibility category | no.            | no.            | no.           | no.           | no.           | no.           |
| Family               | 53 934         | 48 621         | 32 102        | 33 580        | 37 078        | 46 458        |
| Skilled              | 48 421         | 40 334         | 22 137        | 12 794        | 20 210        | 20 008        |
| Humanitarian         | 7 745          | 7 157          | 10 939        | 11 350        | 13 632        | 13 824        |
| New Zealand          | 8 338          | 8 201          | 8 355         | 9 616         | 13 618        | 16 234        |
| Other                | 3 250          | 3 078          | 2 797         | 2 428         | 2 890         | 2 615         |
| <b>Total</b>         | <b>121 688</b> | <b>107 391</b> | <b>76 330</b> | <b>69 768</b> | <b>87 428</b> | <b>99 139</b> |

Source: Bureau of Immigration, Multicultural and Population Research.

**5.39 OCCUPATION OF PERMANENT MIGRANTS(a), 1995–96**

| Occupation                                | Permanent departures          |                               |              | Settler arrivals | Australian population |
|-------------------------------------------|-------------------------------|-------------------------------|--------------|------------------|-----------------------|
|                                           | Departures of former settlers | Departures of other residents | Total        |                  |                       |
|                                           | %                             | %                             | %            | %                | %                     |
| Managers and administrators               | 18.9                          | 15.1                          | 17.1         | 13.9             | 10.6                  |
| Professionals                             | 33.7                          | 25.4                          | 29.7         | 32.7             | 14.1                  |
| Para-professionals                        | 8.4                           | 8.1                           | 8.3          | 7.6              | 5.7                   |
| Tradespersons                             | 10.0                          | 16.7                          | 13.2         | 16.0             | 14.4                  |
| Clerks                                    | 9.9                           | 11.6                          | 10.7         | 10.5             | 16.4                  |
| Salespersons and personal service workers | 10.8                          | 9.5                           | 10.2         | 9.0              | 16.9                  |
| Plant and machine operators               | 2.5                           | 4.3                           | 3.3          | 3.5              | 7.0                   |
| Labourers and related workers             | 6.0                           | 9.4                           | 7.6          | 6.8              | 14.9                  |
| <b>Total</b>                              | <b>100.0</b>                  | <b>100.0</b>                  | <b>100.0</b> | <b>100.0</b>     | <b>100.0</b>          |

(a) Migrants who stated an occupation.

Source: ABS, unpublished data; Labour Force, Australia (6203.0).

## Country of origin

Since the end of World War II, due to high levels of migration the population has increased rapidly, and the proportion of the population born overseas increased from 10% in 1947 to 23% at 30 June 1996 (table 5.40). As well as this increase, there has been a diversification of the population. In 1947, 81% of the overseas born population came from the main English speaking countries (the United Kingdom and Ireland, New Zealand, South Africa, Canada and the United States), mainly from the United Kingdom and Ireland. By 30 June 1996, only 39% of the overseas born population had been born in the main English speaking countries.

For the last few decades, the Italian, Greek and Dutch born populations in Australia have been declining. There were large flows of people from these countries after World War II, and relatively little migration more recently. As these

populations age, they experience high numbers of deaths. There are also significant numbers of people returning to their countries of birth in their retirement.

Preliminary population estimates for 1996 identified 23% of the population as overseas born. The 1996 Census showed that a further 27% of persons born in Australia had at least one overseas born parent, that is, they were second generation Australians. The variety and size of second generation populations reflect past migration and intermarriage patterns. In long established migration groups, such as those from the United Kingdom and Ireland, and from northern and southern Europe, second generation Australians form more than half the total birthplace group. In more recently arrived groups, such as those born in Viet Nam, second generation Australians form a smaller part of the birthplace group. This is illustrated in table 5.41.

**5.40 MAIN COUNTRIES OF BIRTH OF THE POPULATION**

|                            | 1947(a)        | 1954(a)        | 1961(a)         | 1971(a)         | 1981(b)         | 1991(b)         | 1996p(b)        |
|----------------------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Country                    | '000           | '000           | '000            | '000            | '000            | '000            | '000            |
| United Kingdom and Ireland | 541.3          | 664.2          | 755.4           | 1 088.3         | 1 175.7         | 1 244.3         | 1 207.6         |
| New Zealand                | 43.6           | 43.4           | 47.0            | 80.5            | 175.7           | 286.4           | 297.5           |
| Italy                      | 33.6           | 119.9          | 228.3           | 289.5           | 285.3           | 272.0           | 258.8           |
| Former Yugoslav Republic   | 5.9            | 22.9           | 49.8            | 129.8           | 156.1           | 168.0           | 186.1           |
| Viet Nam                   | n.a.           | n.a.           | n.a.            | 0.7             | 43.4            | 124.8           | 149.9           |
| Greece                     | 12.3           | 25.9           | 77.3            | 160.2           | 153.2           | 147.4           | 144.6           |
| Germany                    | 14.6           | 65.4           | 109.3           | 110.8           | 115.2           | 120.4           | 118.9           |
| China                      | 6.4            | 10.3           | 14.5            | 17.6            | 26.8            | 84.6            | 103.4           |
| Hong Kong                  | n.a.           | n.a.           | n.a.            | n.a.            | 16.3            | (c)62.4         | (c)98.0         |
| Netherlands                | 2.2            | 52.0           | 102.1           | 99.3            | 100.5           | 100.9           | 97.3            |
| Philippines                | 0.1            | 0.2            | 0.4             | 2.6             | 15.8            | 79.1            | 94.7            |
| Total overseas             | 744.2          | 1 286.5        | 1 778.8         | 2 579.3         | 3 111.0         | 3 965.2         | 4 209.0         |
| Australia                  | 6 835.2        | 7 700.1        | 8 729.4         | 10 176.3        | 11 812.3        | 13 318.8        | 14 080.2        |
| <b>Total population</b>    | <b>7 579.4</b> | <b>8 986.5</b> | <b>10 508.2</b> | <b>12 755.6</b> | <b>14 923.3</b> | <b>17 284.0</b> | <b>18 289.1</b> |

(a) Census counts. (b) Estimated resident population. (c) Includes Macao.

Source: *Australia in Profile* (2821.0); *Estimated Resident Population by Country of Birth, Age and Sex, Australia* (3221.0); *Migration, Australia* (3412.0).

## 5.41 FIRST AND SECOND GENERATION AUSTRALIANS, 1996

| Country                    | Overseas born(a) | Second generation<br>Australians | Total          |
|----------------------------|------------------|----------------------------------|----------------|
|                            | '000             | '000                             | '000           |
| United Kingdom and Ireland | 1 124.0          | 1 522.9                          | 2 647.0        |
| Italy                      | 238.2            | 333.9                            | 572.1          |
| New Zealand                | 291.4            | 200.0                            | 491.4          |
| Former Yugoslav Republic   | 175.4            | 131.3                            | 306.7          |
| Greece                     | 126.5            | 153.9                            | 280.5          |
| Germany                    | 110.3            | 139.3                            | 249.6          |
| Netherlands                | 87.9             | 142.5                            | 230.4          |
| Viet Nam                   | 151.1            | 46.8                             | 197.8          |
| China                      | 111.0            | 40.2                             | 151.2          |
| <b>Total population</b>    | <b>3 901.9</b>   | <b>3 595.3</b>                   | <b>7 497.2</b> |

(a) The population identified in this table is based on Census counts, and not the Estimated Resident Population; it therefore has slightly lower levels than the total overseas-born population in table 5.40.

Source: ABS, unpublished Census data, 1996.

## Citizenship

The concept of Australian citizenship is less than 50 years old. Prior to the *Nationality and Citizenship Act 1948* (since renamed the *Australian Citizenship Act 1948*) coming into effect on Australia Day 1949, Australians were simply British subjects. Between that day and 31 December 1995, 2.8 million grants of citizenship were made.

In 1994 the Joint Standing Committee on Migration stated 'Citizenship is the cornerstone of national identity. It defines an individual's legal relationship with Australia, and signals an individual's membership of the Australian community... citizenship represents an individual's commitment to Australia, including the principles on which Australian society is based.'

Generally, older people, and those who have lived in Australia a long time, tend to have higher citizenship rates than younger, more recently

arrived migrants. For example, 96% of the Greek born population, which is relatively old and has been in Australia for a comparatively long time, had taken out Australian citizenship in 1996.

Standardising for these factors gives the citizenship rates that would be expected if a given overseas born population had the same profile of age and period of residence as the total overseas born population (see table 5.42). The standardised citizenship rate for the Greek born population was 87%.

People born in the main English speaking countries, such as the United Kingdom and New Zealand, have very low standardised citizenship rates. This may be because '...the shared language, and strongly similar legal, political, and industrial relations arrangements of Australia and the other Anglo-American countries lead these immigrants to feel less need to make a choice of national identity.' (Evans, M. 1988).

## 5.42 CITIZENSHIP RATES, By Country of Birth — 1996

| Country                    | Persons        | Citizenship rate | Standardised citizenship<br>rate(a) |
|----------------------------|----------------|------------------|-------------------------------------|
|                            | '000           | %                | %                                   |
| Viet Nam                   | 151.1          | 88.5             | 89.6                                |
| Former Yugoslav Republic   | 175.4          | 87.5             | 87.3                                |
| Greece                     | 126.5          | 96.1             | 87.3                                |
| China                      | 111.0          | 48.6             | 76.3                                |
| Italy                      | 238.2          | 78.8             | 65.6                                |
| Germany                    | 110.3          | 75.8             | 63.1                                |
| Netherlands                | 87.9           | 77.7             | 60.4                                |
| United Kingdom             | 1 124.0        | 60.5             | 57.5                                |
| New Zealand                | 291.4          | 32.3             | 38.3                                |
| <b>Total overseas born</b> | <b>3 901.9</b> | <b>67.8</b>      | <b>67.8</b>                         |

(a) The rates of citizenship that would be expected if the population had the same age and period of residence profile as the total overseas born population.

Source: ABS, unpublished Census data, 1996.

#### 5.43 FORMER NATIONALITY, People Granted Australian Citizenship — 1995–96

| Citizenship                | no.            | %            |
|----------------------------|----------------|--------------|
| British and Irish          | 37 119         | 33.2         |
| New Zealander              | 11 724         | 10.5         |
| Vietnamese                 | 7 741          | 6.9          |
| Former Yugoslav Republic   | 5 188          | 4.6          |
| Chinese                    | 4 250          | 3.8          |
| Filipino                   | 4 021          | 3.6          |
| Indian                     | 2 638          | 2.4          |
| United States (citizen of) | 2 272          | 2.0          |
| Fiji (citizen of)          | 1 815          | 1.6          |
| Sri Lankan                 | 1 644          | 1.5          |
| Korean                     | 1 554          | 1.4          |
| Italian                    | 1 469          | 1.3          |
| Turkish                    | 1 307          | 1.2          |
| Malaysian                  | 1 276          | 1.1          |
| South African              | 1 262          | 1.1          |
| Russian                    | 1 239          | 1.1          |
| Maltese                    | 1 237          | 1.1          |
| Polish                     | 1 160          | 1.0          |
| Lebanese                   | 1 105          | 1.0          |
| Canadian                   | 1 015          | 0.9          |
| Iraqi                      | 971            | 0.9          |
| Chilean                    | 904            | 0.8          |
| Iranian                    | 870            | 0.8          |
| Portuguese                 | 805            | 0.7          |
| Thai                       | 793            | 0.7          |
| Greek                      | 638            | 0.6          |
| Afghan                     | 607            | 0.5          |
| Salvadorian                | 602            | 0.5          |
| Ukrainian                  | 598            | 0.5          |
| German                     | 579            | 0.5          |
| Egyptian                   | 542            | 0.5          |
| Argentinian                | 439            | 0.4          |
| Romanian                   | 423            | 0.4          |
| Pakistani                  | 373            | 0.3          |
| Bangladeshi                | 265            | 0.2          |
| Jordanian                  | 173            | 0.2          |
| Other countries            | 10 240         | 9.2          |
| Stateless                  | 779            | 0.7          |
| <b>Total</b>               | <b>111 637</b> | <b>100.0</b> |

Source: Bureau of Immigration, Multicultural and Population Research, 'Australian Immigration: Consolidated Statistics and Immigration Update'.

The United Kingdom and Ireland have consistently been the largest source of new Australian citizens since the early 1970s, with about one-third of all citizenship grants since 1970. This reflects the large numbers of migrants who have come from the United Kingdom and Ireland over this period (see table 5.43).

However, this was not always the case. In 1949–65, only 4% of citizenship grants were made to former citizens of the United Kingdom and Ireland. Former Italian citizens made up 21% of new citizens in that period, followed by former citizens of the Netherlands (13%), the

then USSR and Poland (both 12%). In the late 1960s former citizens of the United Kingdom and Ireland increased their take-up of Australian citizenship and represented 10% of grants of citizenship in 1965–70, third after former Italian citizens (21%) and former Greek citizens (13%).

### Religion

In 1983 the High Court of Australia defined religion as 'a complex of beliefs and practices which point to a set of values and an understanding of the meaning of existence.'

At the time of European settlement, the Aboriginal inhabitants followed their own religions which were animistic in nature, involving belief in spirits behind the forces of nature and the influence of ancestral spirit beings.

During the 1800s, European settlers brought their traditional churches to Australia. These included the Church of England (now the Anglican Church), and the Methodist, Catholic, Presbyterian, Congregationalist and Baptist churches. In 1838 German Lutherans arrived in South Australia. From the 1840s onwards, groups such as Mormons, Swedenborgians, Spiritualists, Christadelphians, Seventh-day Adventists, Christian Scientists and Jehovah's Witnesses arrived in Australia.

With the exception of a small but significant Lutheran element, Australian society in 1901 was predominantly Anglo-Celtic, with 40% of the population being Church of England, 23% Catholic, 34% Other Christian and about 53,000 professing other religions. By the time of the Census in 1954 the population had more than doubled, but the profile was similar with 38% Church of England (Anglican), 23% Catholic, 28% Other Christian and a figure for other religions of about 55,000 persons.

Immigration to Australia has reshaped the religious profile. The impact of migration from Europe in the aftermath of World War II led to an increase in affiliates of the Orthodox Churches, the forming of Reformed bodies, and the growth in the number of Catholics, particularly from Italian migration, as well as the formation of ethnic parishes in many other denominations. More recently immigration from South East Asia and the Middle East has expanded Buddhist and Muslim numbers considerably, while also adding to the ethnic diversity in Christian groups. As the year 2000 approaches, Australia is nominally 27% Catholic, 22% Anglican, 8% Uniting Church, 4%

Presbyterian and Reformed, 3% Orthodox and 3% other religions, with some 25% uncommitted or professing no religion.

In every Census taken in Australia, a voluntary question on religious affiliation has been asked. Since 1933, the voluntary nature of the religion question has been specifically stated. In 1971, the instruction 'if no religion, write none' was introduced. The percentage who stated no religion has increased from 0.4% of the population in 1911 to almost 17% at the 1996 Census. Table 5.44 provides a summary of the major religious affiliations at each Census since 1911. At the 1996 Census, 71% of the population stated a Christian religion compared with 96% in 1911.

The number of people who stated that they had no religion increased by 35.5% since the 1991 Census and is now the third largest group behind Catholics and Anglicans. People who did not state their religious preference decreased by 9.4%.

While Australia's population grew by 5.4% in the five years to 1996, stated affiliations to many religions grew at a far greater rate.

Between the 1991 and 1996 Censuses the number of Anglican affiliates decreased by

115,455 (2.9%) while Catholic affiliates increased by 192,299 (4.2%). However both groups decreased their proportion of total religious affiliation.

Other Christian religions which showed a decrease in affiliates were Presbyterian and Reformed (7.7%), Churches of Christ (4.2%), the Uniting Church (3.8%) and the Lutheran Church (0.4%).

The Christian groups that showed the largest percentage increases in affiliates were Pentecostal (16.0%) and Jehovah's Witness (11.6%).

Affiliates of other religions, while only 3.5% of the population in 1996, have shown the largest increases since the 1991 Census.

Stated affiliation to Hinduism increased by 54.5%, to Buddhism 42.9%, to Islam 36.2% and to Judaism 7.6%.

Table 5.45 shows the breakdown of religious groupings by the number and percentage of affiliates at the 1991 and 1996 Censuses, and the growth which occurred during that five year period.

#### 5.44 MAJOR RELIGIOUS AFFILIATIONS

| Census year | Christianity |          |       |       |                 |             | Religious affiliation                    | Total    |
|-------------|--------------|----------|-------|-------|-----------------|-------------|------------------------------------------|----------|
|             | Anglican     | Catholic | Other | Total | Other religions | No religion | Not stated/<br>inadequately<br>described |          |
|             | %            | %        | %     | %     | %               | %           | %                                        | '000     |
| 1911        | 38.4         | 22.4     | 35.1  | 95.9  | 0.8             | 0.4         | (b)(a)2.9                                | 4 455.0  |
| 1921        | 43.7         | 21.7     | 31.6  | 96.9  | 0.7             | 0.5         | (b)(a)1.9                                | 5 435.7  |
| 1933        | 38.7         | 19.6     | 28.1  | 86.4  | 0.4             | 0.2         | 12.9                                     | 6 629.8  |
| 1947        | 39.0         | 20.9     | 28.1  | 88.0  | 0.5             | 0.3         | 11.1                                     | 7 579.4  |
| 1954        | 37.9         | 22.9     | 28.5  | 89.4  | 0.6             | 0.3         | 9.7                                      | 8 986.5  |
| 1961        | 34.9         | 24.9     | 28.4  | 88.3  | 0.7             | 0.4         | 10.7                                     | 10 508.2 |
| 1966        | 33.5         | 26.2     | 28.5  | 88.2  | 0.7             | 0.8         | 10.3                                     | 11 599.5 |
| 1971        | 31.0         | 27.0     | 28.2  | 86.2  | 0.8             | 6.7         | 6.2                                      | 12 755.6 |
| 1976        | 27.7         | 25.7     | 25.2  | 78.6  | 1.0             | 8.3         | 11.4                                     | 13 548.4 |
| 1981        | 26.1         | 26.0     | 24.3  | 76.4  | 1.4             | 10.8        | 11.4                                     | 14 576.3 |
| 1986        | 23.9         | 26.0     | 23.0  | 73.0  | 2.0             | 12.7        | 12.4                                     | 15 602.2 |
| 1991        | 23.8         | 27.3     | 22.9  | 74.0  | 2.6             | 12.9        | 10.5                                     | 16 850.3 |
| 1996        | 22.0         | 27.0     | 21.9  | 70.9  | 3.5             | 16.6        | 9.0                                      | 17 752.8 |

(a) Includes 'object to state'.

Source: ABS, unpublished Census data, 1996.

## 5.45 RELIGIOUS AFFILIATION

|                                   | 1991            |              | 1996            |              | Growth     |
|-----------------------------------|-----------------|--------------|-----------------|--------------|------------|
|                                   | No.             | Proportion   | No.             | Proportion   |            |
|                                   | '000            | %            | '000            | %            | %          |
| Christianity                      |                 |              |                 |              |            |
| Anglican                          | 4 018.8         | 23.8         | 3 903.3         | 22.0         | -2.9       |
| Baptist                           | 279.8           | 1.7          | 295.2           | 1.7          | 5.5        |
| Catholic                          | 4 606.7         | 27.3         | 4 799.0         | 27.0         | 4.2        |
| Churches of Christ                | 78.3            | 0.5          | 75.0            | 0.4          | -4.2       |
| Jehovah's Witness                 | 74.7            | 0.4          | 83.4            | 0.5          | 11.6       |
| Lutheran                          | 250.9           | 1.5          | 250.0           | 1.4          | -0.4       |
| Orthodox                          | 474.9           | 2.8          | 497.0           | 2.8          | 4.7        |
| Pentecostal                       | 150.6           | 0.9          | 174.7           | 1.0          | 16.0       |
| Presbyterian and Reformed         | 732.0           | 4.3          | 675.5           | 3.8          | -7.7       |
| Salvation Army                    | 72.3            | 0.4          | 74.1            | 0.4          | 2.5        |
| Uniting Church                    | 1 387.7         | 8.2          | 1 334.9         | 7.5          | -3.8       |
| Other Christian                   | 339.6           | 2.0          | 420.6           | 2.4          | 23.9       |
| Buddhism                          | 139.8           | 0.8          | 199.8           | 1.1          | 42.9       |
| Hinduism                          | 43.6            | 0.3          | 67.9            | 0.4          | 54.4       |
| Islam                             | 147.5           | 0.9          | 200.9           | 1.1          | 36.2       |
| Judaism                           | 74.3            | 0.4          | 79.8            | 0.4          | 7.6        |
| Other religions                   | 40.0            | 0.2          | 68.6            | 0.4          | 71.6       |
| No religion                       | 2 176.6         | 12.9         | 2 948.9         | 16.6         | 35.5       |
| Not stated/inadequately described | 1 762.1         | 10.5         | 1 604.7         | 9.0          | -8.9       |
| <b>Total</b>                      | <b>16 850.3</b> | <b>100.0</b> | <b>17 752.8</b> | <b>100.0</b> | <b>5.4</b> |

Source: ABS, unpublished Census data, 1991 and 1996.

## Languages

English is the national language. At the same time, Australia's cultural vitality is also a product of other languages spoken in the community. These include, for example, the Australian Indigenous languages, as well as European and Asian languages.

In the 1996 Census, people were asked whether they spoke a language other than English at home. Among those who stated that they did, 363,200 spoke Italian (11.6% overseas born, 19.3% Australian born), 321,900 spoke a Chinese

language (15.5% overseas born, 4.5% Australian born), and a further 257,000 spoke Greek (7.4% overseas born, 15.7% Australian born). Altogether over 2.6 million people, most of whom were born overseas, spoke a non-English language at home (see table 5.46).

Most of the main European languages spoken at home (French, German, Greek, Hungarian, Italian, Netherlandic (Dutch/Flemish) and Spanish) showed a decrease from the 1991 Census for both overseas born and Australian born.



## 5.46 PERSONS(a) WHO SPOKE A LANGUAGE OTHER THAN ENGLISH AT HOME, 1996

|                              | Overseas born |              |                |              | Australian born |              |              |              |
|------------------------------|---------------|--------------|----------------|--------------|-----------------|--------------|--------------|--------------|
|                              | Males         | Females      | Persons        | Persons      | Males           | Females      | Persons      | Persons      |
| Language spoken at home      | '000          | '000         | '000           | %            | '000            | '000         | '000         | %            |
| Aboriginal language          | 0.2           | 0.2          | 0.5            | —            | 21.4            | 21.9         | 43.3         | 5.7          |
| Arabic/Lebanese              | 51.9          | 47.5         | 99.4           | 5.3          | 30.7            | 29.6         | 60.3         | 7.9          |
| Chinese(b)                   | 137.9         | 149.8        | 287.7          | 15.5         | 18.1            | 16.1         | 34.2         | 4.5          |
| Netherlandic (Dutch/Flemish) | 15.9          | 19.1         | 35.0           | 1.9          | 2.3             | 2.7          | 5.0          | 0.6          |
| French                       | 14.3          | 15.3         | 29.6           | 1.6          | 3.7             | 4.4          | 8.1          | 1.1          |
| German                       | 36.8          | 40.6         | 77.4           | 4.2          | 8.9             | 9.1          | 18.0         | 2.3          |
| Greek                        | 68.3          | 68.6         | 136.9          | 7.4          | 61.1            | 59.0         | 120.1        | 15.7         |
| Hungarian                    | 10.2          | 11.3         | 21.4           | 1.2          | 2.1             | 2.1          | 4.2          | 0.5          |
| Italian                      | 108.7         | 106.6        | 215.3          | 11.6         | 73.0            | 74.9         | 147.9        | 19.3         |
| Macedonian                   | 22.6          | 21.4         | 44.0           | 2.4          | 11.9            | 11.6         | 23.6         | 3.1          |
| Maltese                      | 15.9          | 15.9         | 31.8           | 1.7          | 6.2             | 6.1          | 12.3         | 1.6          |
| Polish                       | 23.3          | 27.5         | 50.7           | 2.7          | 4.8             | 5.0          | 9.8          | 1.3          |
| Russian                      | 11.6          | 14.3         | 25.9           | 1.4          | 1.9             | 2.0          | 3.9          | 0.5          |
| Croatian                     | 22.6          | 20.1         | 44.7           | 2.4          | 10.8            | 10.6         | 21.4         | 2.8          |
| Serbian                      | 14.1          | 13.4         | 27.5           | 1.5          | 3.8             | 3.8          | 7.7          | 1.0          |
| Tagalog (Filipino)           | 24.1          | 39.3         | 63.5           | 3.4          | 1.7             | 1.6          | 3.3          | 0.4          |
| Spanish                      | 34.3          | 36.8         | 71.0           | 3.8          | 7.7             | 7.5          | 15.2         | 2.0          |
| Turkish                      | 14.7          | 14.0         | 28.7           | 1.5          | 6.7             | 6.3          | 13.1         | 1.7          |
| Vietnamese                   | 58.2          | 58.2         | 116.4          | 6.3          | 8.7             | 8.1          | 16.8         | 2.2          |
| Other                        | 203.8         | 208.7        | 412.5          | 22.2         | 39.3            | 36.8         | 76.1         | 9.9          |
| <b>Total(c)</b>              | <b>910.2</b>  | <b>951.6</b> | <b>1 861.8</b> | <b>100.0</b> | <b>383.2</b>    | <b>382.8</b> | <b>766.1</b> | <b>100.0</b> |

(a) Excludes children aged under 5 years and persons who did not state their birthplace. (b) Includes 'Chinese as stated', 'Cantonese', 'Mandarin', 'Chinese languages n.e.i.'. (c) Includes 'language not stated' responses.

Source: Census 1996.

Within the group who spoke a language other than English at home, proficiency in English varied according to age and birthplace. Over 92% of 5 to 24 year olds spoke English well or very well, compared with 61% of those aged 65 years and over (see table 5.47). The influence of birthplace was evident in the consistently

higher level of proficiency in English among those born in Australia, of whom 95% spoke English well or very well, compared with 82% overall. However, proficiency in speaking English well has increased slightly in all age groups since the 1991 Census.

## 5.47 PROFICIENCY IN ENGLISH, Persons Who Spoke a Language Other than English at Home — 1996

| Proficiency in English                                         | Unit | Age group (years) |         |         |         | Total     |
|----------------------------------------------------------------|------|-------------------|---------|---------|---------|-----------|
|                                                                |      | 5-24              | 25-44   | 45-64   | >64     |           |
| Total population speaking other than English at home           |      |                   |         |         |         |           |
| Speaks English well/very well                                  | %    | 92.1              | 84.6    | 75.2    | 60.7    | 81.6      |
| Does not speak English well                                    | %    | 6.9               | 13.8    | 21.3    | 27.7    | 15.3      |
| Does not speak English at all                                  | %    | 1.0               | 1.7     | 3.5     | 11.6    | 3.1       |
| Total                                                          | %    | 100.0             | 100.0   | 100.0   | 100.0   | 100.0     |
| Total(a)                                                       | no.  | 730 520           | 876 327 | 609 821 | 299 512 | 2 516 180 |
| Australian born population speaking other than English at home |      |                   |         |         |         |           |
| Speaks English well/very well                                  | %    | 95.3              | 96.9    | 90.3    | 87.3    | 95.4      |
| Does not speak English well                                    | %    | 4.0               | 2.5     | 7.6     | 9.2     | 3.8       |
| Does not speak English at all                                  | %    | 0.7               | 0.6     | 2.2     | 3.5     | 0.8       |
| Total                                                          | %    | 100.0             | 100.0   | 100.0   | 100.0   | 100.0     |
| Total(b)                                                       | no.  | 400 379           | 222 747 | 36 162  | 16 309  | 675 597   |

(a) Includes 37,000 who did not state how well they speak English. (b) Includes 15,000 who did not state how well they speak English.

Source: Census 1996.



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# Changing links with Europe

## Introduction

Europe is one continent, but has a wide variety of cultures and histories. In 1994, 13% of the world's population lived in Europe. The countries of the European Union (EU) alone accounted for 38% of total world exports and 37% of total world imports. However, the majority of European trade is with other European countries<sup>1</sup>.

As Australia has been strengthening its relationship with neighbouring countries in Asia over recent decades (see *Australian Social Trends 1996*, 'Expanding links with Asia', pp. 10–16), our relationship with Europe has also changed. This article illustrates some of the main changes. Appendix 1 defines the main country groupings in Europe and the former USSR.

## Europeans in Australia

The vast majority of the convicts who arrived in 1788, and of the soldiers who commanded them, were of British origin. The gold rushes in the 1850s and 1860s first brought people from a variety of cultural backgrounds into Australia. However, fears of invasion from Asia and a belief that people from different cultural backgrounds could not live together in one country fuelled a

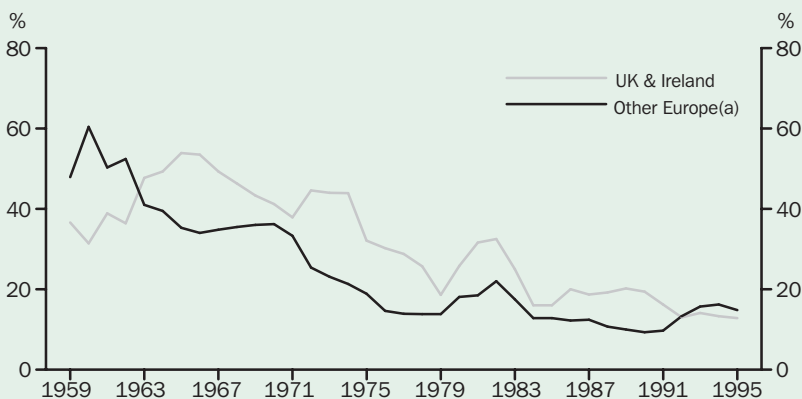
move towards restricting settlers to people from Britain<sup>2</sup>.

The White Australia Policy (including the *Immigration Restriction Act 1901*, the *Pacific Islanders Labourers Act 1901* and the *Naturalisation Act 1903*) was a policy of restricting immigration. It included a dictation test in any European language chosen by the administering officer<sup>2</sup>. This policy continued in practice until well after World War II. Through the 1950s, 1960s and 1970s a number of different European countries contributed, in turn, to Australian settler numbers. Australia began taking settlers first from Northern Europe and later from Southern Europe. By the 1960s small numbers of Asian immigrants were also entering Australia. However it was not until 1973 that the White Australia Policy completely disappeared.

## Settler arrivals

In 1995, 28% of settlers arriving in Australia had been born in Europe. The single largest source for settlers remained the United Kingdom and Ireland (13%) — see graph S2.1. The other European countries from which Australia received more than 1,000 settlers in 1995 were the countries of the former Yugoslav Republics (particularly Bosnia-Herzegovina) and the countries of the former Union of Soviet Socialist Republics.

S2.1 COUNTRIES OF BIRTH OF SETTLER ARRIVALS



(a) Includes Cyprus as part of Europe since 1986.

Source: Overseas Arrivals and Departures, Australia (3404.0); ABS, unpublished data.

The United Kingdom and Ireland has been the largest source of settlers throughout this century. In 1925, 78% of settlers to Australia were British nationals<sup>3</sup>. In the pre-World War II period (1925–1939), the proportion of settlers who were British nationals averaged 71%. By the late 1940s the proportion had dropped to below half. However it was not until the mid 1970s that the proportion of settlers who were from the United Kingdom and Ireland began to fall dramatically, from 44% in 1974 to 13% in 1995.

The proportion of settlers who were from other European countries was low in the period between the World Wars but peaked in 1960 at 60%. In the same year the proportion from the United Kingdom and Ireland had dropped to its lowest point until 1976, at 31%. Table S2.2 shows the main countries of birth of settler arrivals in 1976 and 1995.

## S2.2 COUNTRIES OF BIRTH OF SETTLER ARRIVALS

|                                   | 1976(a)      | 1995         | 1995          |
|-----------------------------------|--------------|--------------|---------------|
| Selected countries                | %            | %            | no.           |
| Europe and the former USSR        | 44.8         | 27.6         | 26 742        |
| UK and Ireland                    | 30.2         | 12.8         | 12 367        |
| Former Yugoslav Republics         | 2.6          | 7.6          | 7 387         |
| Former USSR and the Baltic States | 0.8          | 2.0          | 1 909         |
| Germany                           | 1.3          | 0.9          | 911           |
| Italy                             | 2.0          | 0.3          | 312           |
| Greece                            | 2.7          | 0.3          | 285           |
| <b>Total settlers(b)</b>          | <b>100.0</b> | <b>100.0</b> | <b>96 969</b> |

(a) Excludes Cyprus. (b) Includes other countries of birth.

Source: ABS, unpublished Overseas Arrivals and Departures data.

Many long-term visitor arrivals to Australia become settlers. In 1995, as in 1986, 19% of all long-term visitor arrivals to Australia had been born in Europe, mainly the United Kingdom and Ireland, Germany, France and the Netherlands.

## Overseas-born Australians

In 1995, 58% of overseas-born Australians had been born in a European country, over half of these in the United Kingdom and Ireland.

However the proportion born in the United Kingdom and Ireland dropped from 79% in 1901 to 29% in 1995 (see table S2.3).

In 1901 the other important European country of birth was Germany (4%). By 1947 the proportion had dropped to 2%. It increased to 5% again during the 1950s and 1960s before dropping to 3% by 1995.

Italy provided a substantial proportion of the overseas-born population, particularly in the second half of the century. In 1966, 13% of overseas-born Australians had been born in Italy. However, by 1995 this had halved to 6% of the overseas-born population.

## S2.3 SELECTED COUNTRIES OF BIRTH OF OVERSEAS-BORN AUSTRALIAN RESIDENTS

|                                  | 1901         | 1947         | 1954           | 1966           | 1976           | 1986           | 1995p          |
|----------------------------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|
|                                  | %            |              |                |                |                |                |                |
| Europe and the former USSR       | 87.9         | 87.6         | 89.8           | 88.9           | 81.3           | 68.4           | 57.6           |
| Germany                          | 4.5          | 2.0          | 5.1            | 5.1            | 4.0            | 3.5            | 2.9            |
| Greece                           | 0.1          | 1.7          | 2.0            | 6.6            | 5.6            | 4.2            | 3.5            |
| Italy                            | 0.7          | 4.5          | 9.3            | 12.5           | 10.3           | 8.1            | 6.3            |
| UK and Ireland                   | 79.2         | 72.7         | 51.6           | 42.6           | 41.1           | 34.7           | 29.4           |
| Former Yugoslav Republics        | (a)          | 0.8          | 1.8            | 3.3            | 5.3            | 4.6            | 4.4            |
| Other Europe and the former USSR | 3.5          | 5.9          | 20.0           | 18.8           | 15.0           | 13.2           | 11.1           |
| <b>Total overseas born(b)</b>    | <b>100.0</b> | <b>100.0</b> | <b>100.0</b>   | <b>100.0</b>   | <b>100.0</b>   | <b>100.0</b>   | <b>100.0</b>   |
|                                  | '000         |              |                |                |                |                |                |
| <b>Total overseas born</b>       | <b>857.6</b> | <b>744.2</b> | <b>1 286.5</b> | <b>2 130.9</b> | <b>2 718.8</b> | <b>3 247.4</b> | <b>4 122.3</b> |

(a) Included in the equivalent of Other Europe and the Former USSR. (b) Includes other countries of birth.

Source: ABS, unpublished Census of Population and Housing data (1901–1986), Estimated Resident Population (1995p).

## Emigration

Some settlers emigrate from Australia after living here for a period of years. In 1972, emigration of European-born settlers peaked at 26,400. This was three years after immigration from Europe peaked at 145,400 settlers (see graph S2.4).

In 1995, 4,900 European-born settlers left Australia. This reflects the lower numbers of European immigrants in 1992, 1993 and 1994 (see *Australian Social Trends 1994*, 'Emigration', pp. 13–17).

There is no direct measure of the proportion of new settlers who emigrate within a year of their arrival. An approximation can be obtained by comparing the number of immigrants who arrived in one year with the number of emigrants departing in the same year who stated that they had been in Australia for less than one year. Of the major birthplace groups in 1995, the largest ratio of former settlers emigrating within the same year came from the United Kingdom and Ireland (24 for every 1,000 settlers). This compares to 8 of every 1,000 other Europeans.

Some emigrants spend most of their working (and tax-paying) lives in Australia, then return to their country of birth, or another country, after retirement. In 1995, 34% of the European

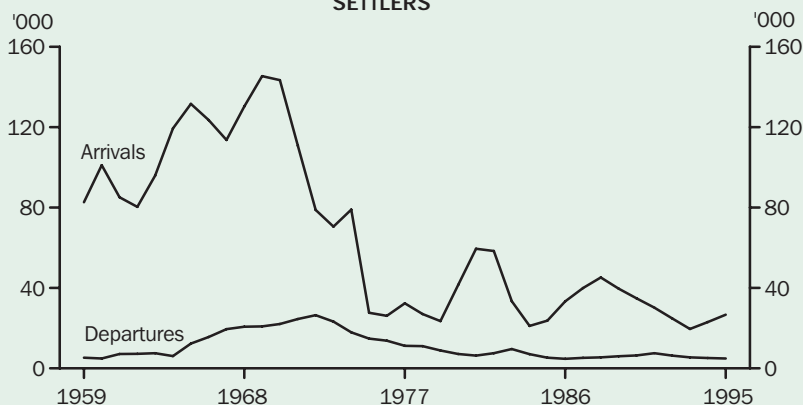
settlers leaving Australia had lived here for 20 years or more.

## Overseas pensions

Australia pays full or partial pensions to many former Australian residents overseas, particularly in Europe, under shared responsibility agreements. In 1996, 40,800 pensions (86% of all pensions paid overseas) were paid to European residents; 14,900 (32%) were paid to Italian residents and 8,200 (17%) were paid to Greek residents (see graph S2.5). The majority (88%) of pensions paid to European residents were age or disability support pensions.

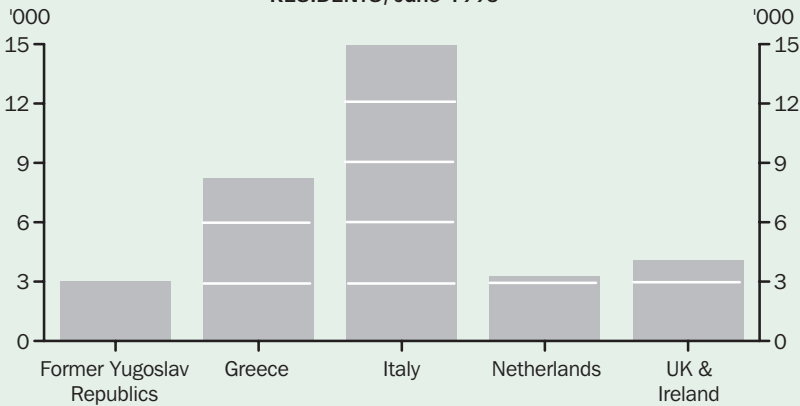
Data relating to overseas pensions do not identify all Australians receiving pensions overseas, as some countries, such as New Zealand and the United Kingdom, have host country agreements with Australia to pay pensions to Australian former residents, while Australia pays pensions to their former residents living in Australia. These agreements do not include portability arrangements for some Australian residents who qualify for a pension in Australia and subsequently migrate to another country, taking their pension with them.

**S2.4 PERMANENT ARRIVALS AND DEPARTURES OF EUROPEAN-BORN SETTLERS**



Source: ABS, unpublished Overseas Arrivals and Departures data.

**S2.5 DISTRIBUTION OF AUSTRALIAN PENSIONS PAID TO OVERSEAS RESIDENTS, June 1996**



Source: Department of Social Security, *DSS Customers: A Statistical Overview*, 1996.

**Europeans visiting Australia**

Although the number of permanent settlers from Europe has dropped markedly since earlier this century, the number of Europeans visiting Australia has increased. In 1995, 752,000 short-term visitors arrived from Europe, over twice the number (347,000) in 1986.

However, most short-term visitors to Australia came from Asia (1.9 million in 1995). Thus, while the number of European visitors has increased, their proportion of all visitors has declined over the last decade (from 24% to 20%). Graph S2.7 shows short-term visits of Europeans to Australia and of Australians to Europe as a proportion of all visits to and from Australia.

People travelling to and from Australia are asked to give the main reason for their trip. In 1995 almost half (49%) of all European visitors came

to Australia for a holiday and 34% came to visit relations or friends (see table S2.6). Most of the remainder (11% of all European visitors) came for business or employment purposes. This pattern has changed since 1986, when there were proportionally fewer visitors coming to Australia for a holiday. Between 1986 and 1995 the number of European visitors coming to Australia for a holiday nearly tripled, while the number coming to visit family or friends almost doubled (see graph S2.8).

Source countries of short-term visitors from Europe varied somewhat from those of permanent settlers. Approximately half of both settlers and visitors from Europe were from the United Kingdom and Ireland in 1995. However, 17% of short-term visitors were from Germany and 5% were from each of Italy, Switzerland, France and the Netherlands.

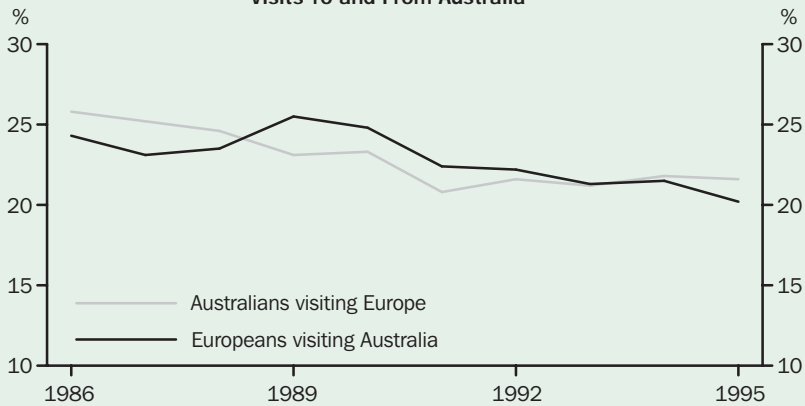
**S2.6 REASONS FOR SHORT-TERM VISITS TO AUSTRALIA BY EUROPEANS, 1995**

|                            | Business/employment(a) | Relations/friends | Holiday | Total(b) |
|----------------------------|------------------------|-------------------|---------|----------|
| Country of residence       | %                      | %                 | %       | %        |
| Europe and the former USSR | 11.4                   | 33.8              | 49.3    | 100.0    |
| UK and Ireland             | 10.5                   | 46.3              | 39.0    | 100.0    |
| Germany                    | 8.3                    | 15.7              | 71.3    | 100.0    |
| Italy                      | 12.9                   | 25.5              | 54.9    | 100.0    |
| Switzerland                | 6.8                    | 14.4              | 73.0    | 100.0    |
| France                     | 18.4                   | 18.9              | 54.1    | 100.0    |
| Netherlands                | 10.6                   | 36.6              | 47.1    | 100.0    |

(a) Includes visits for conferences and conventions. (b) Includes other reasons.

Source: ABS, unpublished Overseas Arrivals and Departures data.

**S2.7 SHORT-TERM VISITS TO AND FROM AUSTRALIA, Proportion of All Visits To and From Australia**

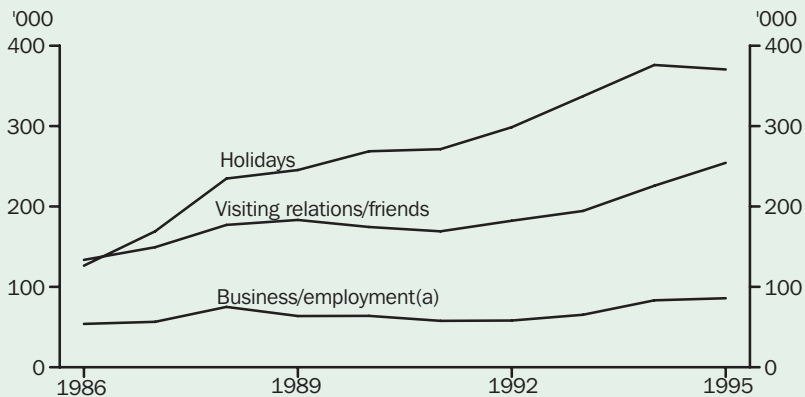


Source: ABS, unpublished Overseas Arrivals and Departures data.

In 1995, the United Kingdom and Ireland were the only countries in Europe from which more visitors came to visit relatives and friends (46%) than for a holiday (39%). In comparison, 73% of Swiss visitors and 71% of German visitors came for a holiday. Some 18% of French visitors came for business or employment reasons compared

to an average of 11% for all European visitors. However, of all European visitors who came for business or employment reasons, 44% came from the United Kingdom and Ireland and 12% came from Germany.

**S2.8 REASONS FOR SHORT-TERM VISITS TO AUSTRALIA BY EUROPEANS**



(a) Includes visits for conferences and conventions

Source: ABS, unpublished Overseas Arrivals and Departures data.

Australians visiting Europe

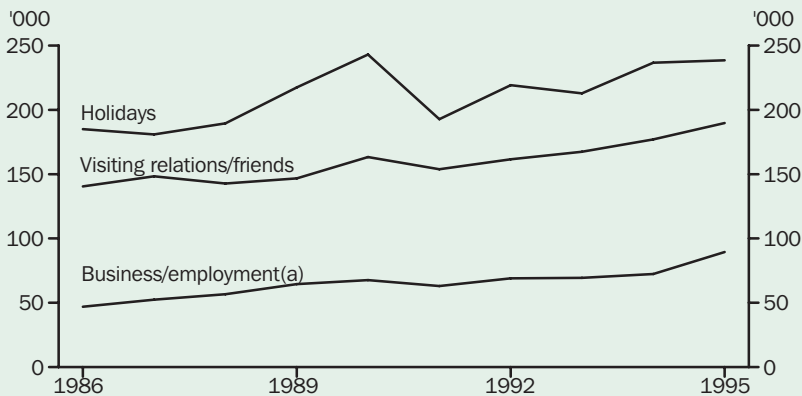
As with the number of European visitors to Australia, the number of Australians visiting Europe has also increased. Between 1986 and 1995 visitor numbers grew by 37%, from 397,000 to 544,000. In comparison, 939,000 Australians visited Asia in 1995, up from 497,000 in 1986. As a proportion of all departures, trips to Europe declined from 26% to 22% (see graph S2.7).

As graph S2.9 shows, in 1995 most Australians visiting Europe did so for a holiday (44%) or to visit relations or friends (35%). 16% travelled for business or employment purposes. This pattern was similar in 1986 but the increase in the number of Australians visiting Europe for a holiday has not been as high as the increase in the number of Europeans visiting Australia for a

holiday. Australians going to Europe for business or employment reasons increased from 46,900 in 1986 to 89,400 in 1995. The number of Europeans coming to Australia for short-term business trips also increased over the period, from 53,800 to 85,900.

The main destination of Australian visitors to Europe was the United Kingdom and Ireland. 52% of all Australians visiting Europe went to these countries in 1995. A further 9% went to Italy and 6% went to Greece and Germany. Around half of the visitors to the United Kingdom and Ireland, Greece, Italy and France were there for holidays. In comparison, one quarter of visitors to Germany were there for holidays, 33% were there for business or employment purposes and 36% were there to visit relations and friends.

S2.9 REASONS FOR SHORT-TERM VISITS TO EUROPE BY AUSTRALIANS



(a) Includes visits for conferences and conventions  
Source: ABS, unpublished Arrivals and Departures data.



## Investment with Europe

The changes in Australia's relationship with Europe can be measured not only in the number of people moving between Australia and Europe, but also in the levels of trade and investment between Australia and Europe.

At 30 June 1995, Australia had \$141.2 billion invested abroad, 36% of that in Europe. At the same time, European investment in Australia made up 30% of total foreign investment in Australia (see table S2.10). The respective proportions were much the same in 1990. Thus in terms of investment our overall relationship with Europe has changed very little in these five years.

In 1995, the United Kingdom accounted for 19% of investment in Australia and 20% of Australian investment abroad. The only country in which Australian investment abroad was greater (and from which the investment in Australia was also greater) was the United States.

The European country with the highest investment in Australia, other than the United Kingdom, was the Netherlands. In 1995, 3% of foreign investment in Australia was from the Netherlands.

## Trade with Europe

Overall, the proportion of Australia's trade with Europe throughout the last decade has declined slightly. In relative terms, our exports to the European Union have dropped from a peak of 16% of total exports in 1986–87 to 11% in 1995–96. Our imports from the European Union have also dropped, from 27% of total imports in 1985–86 to a low of 22% in 1992–93, before rising again to 25% in 1995–96 (see graph S2.11).

The balance of trade between Australia and the European Union has grown more in favour of the European Union as the gap between imports and exports has increased.

The United Kingdom continues to be an important trading partner, receiving 4% of our exports, while 6% of our imports came from there in 1995–96 (see graph S2.12). A further 6% of our imports came from Germany.

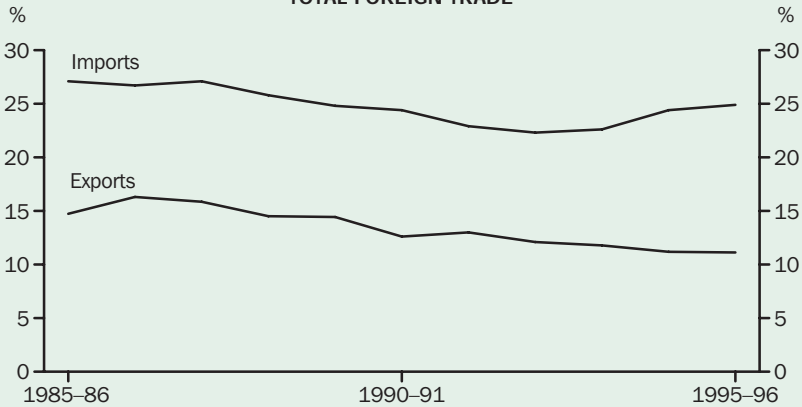
While the balance of trade remains in favour of the United Kingdom, the gap between imports and exports has narrowed over the decade.

**S2.10 AUSTRALIA'S INVESTMENT POSITION AT 30 JUNE 1995**

|                            | Australian investment abroad | Foreign investment in Australia |
|----------------------------|------------------------------|---------------------------------|
|                            | %                            |                                 |
| Europe and the former USSR | 35.6                         | 29.9                            |
| European Union             | 27.6                         | 28.0                            |
| Belgium and Luxembourg     | 0.4                          | 2.0                             |
| France                     | 1.4                          | 1.0                             |
| Germany                    | 1.9                          | 2.0                             |
| Netherlands                | 1.6                          | 2.9                             |
| Italy                      | 0.6                          | 0.2                             |
| UK                         | 19.6                         | 19.0                            |
| Other European countries   | 7.9                          | 1.9                             |
| Switzerland                | 0.6                          | 1.8                             |
| Total all countries        | 100.0                        | 100.0                           |
|                            | (\$billion)                  |                                 |
| Europe                     | 50.2                         | 119.7                           |
| Total all countries        | 141.2                        | 400.9                           |

Source: *Balance of Payments and International Investment Position, Australia* (5302.0).

**S2.11 TRADE WITH THE EUROPEAN UNION AS A PROPORTION OF AUSTRALIA'S TOTAL FOREIGN TRADE**



Source: *International Merchandise Trade, Australia* (5422.0).

**S2.12 TRADE WITH THE UNITED KINGDOM AS A PROPORTION OF AUSTRALIA'S TOTAL FOREIGN TRADE**



Source: *International Merchandise Trade, Australia* (5422.0).

## Appendix 1

The *Australian Standard Classification of Countries for Social Statistics (ASCCS)* (1269.0) classifies Europe and the former USSR into six groups.

*The United Kingdom and Ireland* comprises England, Scotland, Wales, Northern Ireland, Channel Islands, Isle of Man and Ireland.

*Southern Europe* comprises Albania, Andorra, Cyprus, Gibraltar, Greece, Holy See, Italy, Malta, Portugal, San Marino, Spain and the Former Yugoslav Republics (Bosnia-Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Slovenia, Serbia and Montenegro).

*Western Europe* comprises Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, Netherlands and Switzerland.

*Northern Europe* comprises Denmark, Faeroe Islands, Finland, Greenland, Iceland, Norway and Sweden.

*Eastern Europe* comprises Bulgaria, Hungary, Poland, Romania, the Czech Republic and the Slovak Republic.

*The Former USSR and the Baltic States* comprises Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, the Russian Federation, Tadjikistan, Turkmenistan, Ukraine and Uzbekistan.

## Appendix 2: European Community

The European Community (EC) grew from the establishment of the European Coal and Steel Community in 1951, the European Atomic Energy Community, and the European Economic Community both in 1957 with six members: Belgium, Germany, France, Italy, Luxembourg and the Netherlands. From 1967 the three communities merged to form the EC. In 1973 Denmark, Ireland and the United Kingdom joined the EC, followed by Greece in 1981, Spain and Portugal in 1986 and Austria, Finland and Sweden in 1995.

Many other European nations have signed special agreements with the EC directly or through the European Free Trade Agreement (Iceland, Liechtenstein, Norway and Switzerland), and other European countries have applied to join the EC.

The EC was formed with the goal of creating a European Union (EU). It aims to set up a common market in Europe ‘where workers, goods and capital could circulate freely’<sup>4</sup>. Thus far, this has included creating a European currency unit (which is expected to be available

in 1999) and a European Parliament. A European passport is now in use, although it is still issued by the individual member country.

In this article European Union is used to denote the countries of the European Community.

## Endnotes

<sup>1</sup> Department of Foreign Affairs and Trade (DFAT) *Australia’s Trade with the European Union 1995*, DFAT, Canberra, 1996.

<sup>2</sup> Jupp, J. (ed.) *The Australian People*, for the Australian Bicentennial Authority, Angus and Robertson, 1988.

<sup>3</sup> British nationals were not necessarily born in the United Kingdom and Ireland. Some may have been born in Commonwealth countries (other than Australia), such as New Zealand. Prior to 1959 nationality, not country of birth, was recorded for immigrants to Australia.

<sup>4</sup> Eurostat, *Europe in Figures*, 2nd edition, Eurostat, Brussels–Luxembourg, 1989.



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## Introduction

The information relating to labour presented in this chapter covers a wide range of aspects. Labour statistics are important economic indicators — changes in measures of employment, unemployment, earnings, overtime, job vacancies and industrial disputes provide insights into the performance of the economy and the effects of economic policy settings. Labour statistics are also very much about people — their entry to the labour force, participation in it, whether they are employed or not, how much they earn, what other benefits they receive, how many hours they work, their mobility between jobs, the training they receive, and their retirement from employment.

This chapter looks first at the size and composition of the labour force, including age, sex, labour force status and birthplace.

It goes on to cover employed persons' demographic characteristics, occupation, industry, whether they are in the private or public sector, their hours worked and other characteristics of their working lives. Next come statistics on unemployment and unemployment rates, demographic characteristics of the unemployed, their job search experience and job vacancies.

The section on persons not in the labour force provides information about those persons who are marginally attached to the labour force, and therefore are potential participants in it. These include discouraged jobseekers.

Next, the chapter looks at those persons who have re-entered the labour force after spending at least a year away from it.

The section dealing with earnings presents increases in award rates and average weekly earnings, along with details of award coverage and the distribution and composition of earnings.

As well as wages and salaries, employees receive and employers pay for a range of additional benefits. Leave entitlements are widespread. Superannuation is an area that has seen marked change in recent years. Other employee

benefits, and costs to employers of employing labour, are set out in detail.

The chapter examines hours worked, including overtime. Statistics are presented about the extent, cause and duration of disputes, followed by details of trade union size and membership.

This is followed by statistics on training provided by employers. The chapter concludes with information on the range of Commonwealth Government training programs presently available.

## The labour force

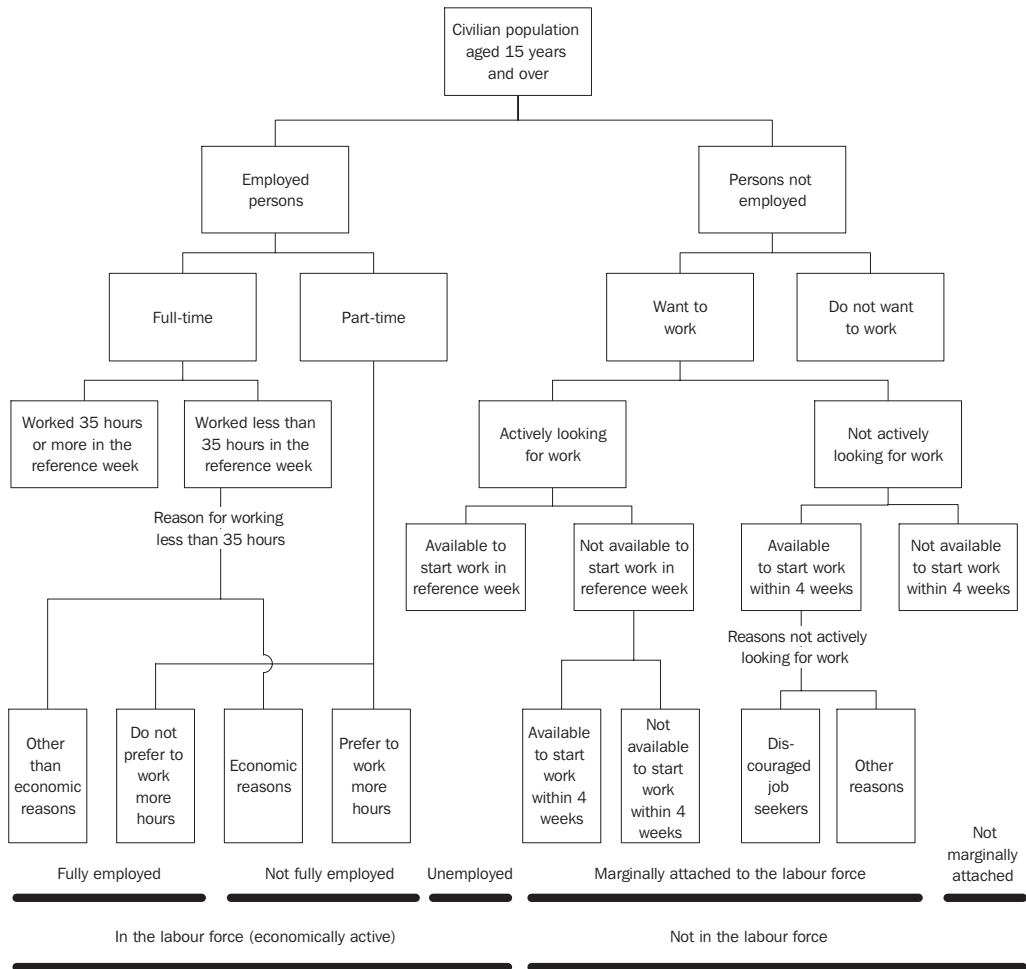
Labour force statistics are collected in a monthly survey of a large sample of dwellings across Australia. The survey provides timely estimates of the labour force status of the Australian population, together with basic demographic data to enable various characteristics of the employed and unemployed to be analysed.

Fundamental to the measurement of employment and unemployment is the concept of the labour force. The labour force is defined as those persons aged 15 and over who during a particular week are either employed or unemployed. The labour force represents the official measure of the total supply of labour available to the labour market during a given week.

The conceptual framework for the Australian labour force is set out schematically in diagram 6.1.

This section presents summary statistics on the civilian labour force drawn from the ABS monthly Labour Force Survey and associated supplementary surveys. The data present a range of characteristics such as whether persons are employed, unemployed or not in the labour force, together with demographic information (age, sex, marital status, etc.). Further details concerning the scope, coverage and survey methods (as well as more detailed statistics) of the labour force and supplementary surveys can be found in the publications listed at the end of this chapter.

6.1 THE AUSTRALIAN LABOUR FORCE FRAMEWORK



Characteristics of the labour force

The size and composition of the labour force are not static over time. Changes in the size of the labour force are caused by changes in labour force participation as well as changes in the population aged 15 and over.

The contribution to labour force growth from population increase was positive between 1991–92 and 1996–97. The contribution due to labour force participation is more variable, with three years of a positive contribution to labour force growth between 1993–94 and 1995–96, before a negative impact of 0.3% on labour force growth in 1996–97 (table 6.2).



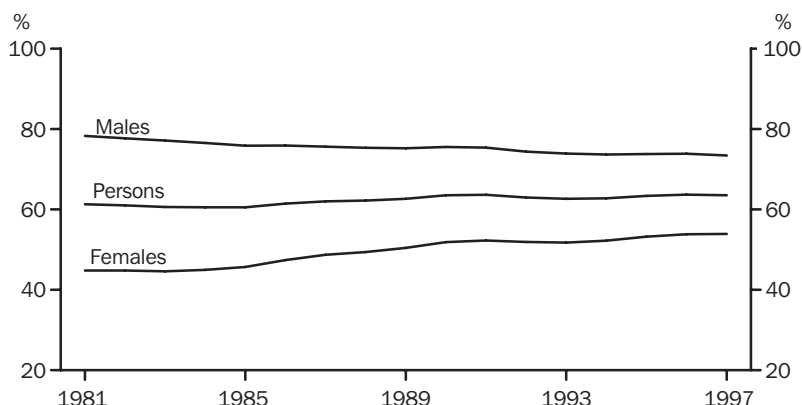
**6.2 LABOUR FORCE, Components of Change — Annual Average**

|                                   | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
|-----------------------------------|---------|---------|---------|---------|---------|---------|
|                                   | %       | %       | %       | %       | %       | %       |
| <b>MALES</b>                      |         |         |         |         |         |         |
| Percentage change in labour force | —       | 0.5     | 0.9     | 1.5     | 1.6     | 1.0     |
| Percentage points change due to   |         |         |         |         |         |         |
| Population growth                 | 1.3     | 1.2     | 1.2     | 1.3     | 1.5     | 1.6     |
| Labour force participation        | -1.3    | -0.7    | -0.3    | 0.2     | 0.1     | -0.6    |
| <b>FEMALES</b>                    |         |         |         |         |         |         |
| Percentage change in labour force | 0.7     | 0.9     | 2.2     | 3.2     | 2.6     | 1.8     |
| Percentage points change due to   |         |         |         |         |         |         |
| Population growth                 | 1.4     | 1.2     | 1.2     | 1.3     | 1.4     | 1.6     |
| Labour force participation        | -0.7    | -0.4    | 1.0     | 1.9     | 1.1     | 0.1     |
| <b>PERSONS</b>                    |         |         |         |         |         |         |
| Percentage change in labour force | 0.3     | 0.7     | 1.4     | 2.2     | 2.0     | 1.3     |
| Percentage points change due to   |         |         |         |         |         |         |
| Population growth                 | 1.4     | 1.2     | 1.2     | 1.3     | 1.5     | 1.6     |
| Labour force participation        | -1.1    | -0.5    | 0.2     | 0.9     | 0.5     | -0.3    |

Source: *Labour Force, Australia* (6203.0).

The participation rate is one of the most important indicators of the labour force. It represents the proportion of the population aged 15 and over who are in the labour force. Analysis of participation rates provides the basis for monitoring changes in the size and composition of labour supply, particularly in

terms of age, sex and marital status. The annual average participation rate for males has generally been declining and in 1996-97 was 73.4%. In contrast, the female participation rate has generally been increasing and in 1996-97 reached 53.9% (graph 6.3).

**6.3 PARTICIPATION RATES, Annual Average**

Source: *Labour Force, Australia* (6203.0).

Table 6.4 shows changes in labour force status over time for both males and females. Notable features include a steady increase in employment for both males and females between 1993–94 and 1996–97; falls in

unemployment between 1992–93 and 1995–96, before a rise in 1996–97; a steady decrease in the male unemployment rate since 1992–93, but a recent rise in the unemployment rate for females.

#### 6.4 CIVILIAN POPULATION AGED 15 AND OVER, Labour Force Status — Annual Average

|                            | Unit | 1991–92 | 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|----------------------------|------|---------|---------|---------|---------|---------|---------|
| MALES                      |      |         |         |         |         |         |         |
| Employed                   | '000 | 4 417.2 | 4 396.9 | 4 472.3 | 4 630.1 | 4 721.5 | 4 765.2 |
| Unemployed                 |      |         |         |         |         |         |         |
| Looking for full-time work | '000 | 491.5   | 531.3   | 500.0   | 415.1   | 401.9   | 403.8   |
| Looking for part-time work | '000 | 44.2    | 50.2    | 49.0    | 51.1    | 53.4    | 58.5    |
| Total unemployed           | '000 | 535.7   | 581.5   | 549.0   | 466.2   | 455.3   | 462.3   |
| Labour force               | '000 | 4 952.9 | 4 978.4 | 5 021.3 | 5 096.3 | 5 176.8 | 5 227.5 |
| Not in the labour force    | '000 | 1 706.1 | 1 760.0 | 1 797.0 | 1 810.4 | 1 832.2 | 1 891.5 |
| Civilian population        | '000 | 6 659.1 | 6 738.3 | 6 818.3 | 6 906.7 | 7 009.0 | 7 119.0 |
| Unemployment rate          | %    | 10.8    | 11.7    | 10.9    | 9.2     | 8.8     | 8.8     |
| Participation rate         | %    | 74.4    | 73.9    | 73.6    | 73.8    | 73.9    | 73.4    |
| FEMALES                    |      |         |         |         |         |         |         |
| Employed                   | '000 | 3 219.5 | 3 237.0 | 3 308.3 | 3 463.0 | 3 578.2 | 3 623.9 |
| Unemployed                 |      |         |         |         |         |         |         |
| Looking for full-time work | '000 | 252.5   | 259.8   | 262.3   | 225.0   | 211.4   | 225.1   |
| Looking for part-time work | '000 | 93.4    | 99.3    | 104.2   | 103.4   | 100.0   | 109.2   |
| Total unemployed           | '000 | 345.9   | 359.0   | 366.4   | 328.4   | 311.4   | 334.3   |
| Labour force               | '000 | 3 565.5 | 3 596.0 | 3 674.7 | 3 791.4 | 3 889.6 | 3 958.1 |
| Not in the labour force    | '000 | 3 303.0 | 3 356.7 | 3 360.5 | 3 333.1 | 3 337.7 | 3 387.6 |
| Civilian population        | '000 | 6 868.5 | 6 952.7 | 7 035.3 | 7 124.5 | 7 227.3 | 7 345.7 |
| Unemployment rate          | %    | 9.7     | 10.0    | 10.0    | 8.7     | 8.0     | 8.4     |
| Participation rate         | %    | 51.9    | 51.7    | 52.2    | 53.2    | 53.8    | 53.9    |

Source: Labour Force, Australia (6203.0).

In 1996–97 the labour force participation rate for persons born overseas was 58.8%, compared with a participation rate of 66.7% for persons born in Australia. The participation rate for persons born overseas in other than main English-speaking countries was 55.5%. Of all overseas born persons, only those born in Oceania (which includes New Zealand) and Northern America have higher participation rates than those born in Australia (table 6.5).

Table 6.6 provides an overview of the labour force status of people viewed according to the family relationship within households. Notable

features include: husbands were employed full-time in 83.7% of couple families with dependants present, 25.3% of wives with dependants were employed full-time, with a further 58.8% employed part-time; in one parent families with dependants, 62.3% of male lone parents were employed full-time and 22.5% of female lone parents were employed full-time; the unemployment rate for lone parents was higher than for those in couple families.

Statistics on labour force status according to level of educational attainment are contained in *Chapter 10, Education*.

### 6.5 CIVILIAN LABOUR FORCE, By Birthplace, Annual Average — 1996–97

|                                  | Employed          |                | Unemployed                 |              | Total labour force | Unemployment rate | Participation rate |
|----------------------------------|-------------------|----------------|----------------------------|--------------|--------------------|-------------------|--------------------|
|                                  | Full-time workers | Total          | Looking for full-time work | Total        |                    |                   |                    |
|                                  | '000              | '000           | '000                       | '000         | '000               | %                 | %                  |
| Born in Australia                | 4 693.2           | 6 362.3        | 448.2                      | 575.3        | 6 937.6            | 8.3               | 66.7               |
| Born outside Australia           |                   |                |                            |              |                    |                   |                    |
| Main English speaking countries  | 688.1             | 890.2          | 56.7                       | 69.9         | 960.1              | 7.3               | 64.0               |
| Other countries                  | 898.5             | 1 136.6        | 123.9                      | 151.4        | 1 287.9            | 11.8              | 55.5               |
| Oceania                          | 185.0             | 235.0          | 21.3                       | 26.3         | 261.3              | 10.1              | 74.2               |
| Europe and the former USSR       | 875.3             | 1 124.7        | 82.9                       | 99.3         | 1 224.0            | 8.1               | 54.8               |
| The Middle East and North Africa | 65.2              | 83.4           | 17.2                       | 20.2         | 103.6              | 19.5              | 53.4               |
| South-East Asia                  | 185.0             | 229.4          | 29.8                       | 36.9         | 266.3              | 13.9              | 63.0               |
| North-East Asia                  | 82.5              | 106.3          | 8.0                        | 11.1         | 117.4              | 9.5               | 52.2               |
| Northern America                 | 35.8              | 48.6           | 2.0                        | 2.6          | 51.2               | 5.0               | 71.9               |
| Other                            | 157.7             | 199.3          | 19.5                       | 24.9         | 224.2              | 11.1              | 69.4               |
| Total born outside Australia     | 1 586.7           | 2 026.8        | 180.7                      | 221.2        | 2 248.0            | 9.8               | 58.8               |
| <b>Total</b>                     | <b>6 279.8</b>    | <b>8 389.1</b> | <b>628.8</b>               | <b>796.5</b> | <b>9 185.6</b>     | <b>8.7</b>        | <b>64.6</b>        |

Source: *Labour Force, Australia* (6203.0).

## 6.6 LABOUR FORCE STATUS: RELATIONSHIP IN HOUSEHOLD, June 1996(a)

|                        | Employed       |                | Unemployed                 |              | Labour force   | Not in labour force | Civilian population aged 15 and over | Unemployment rate | Participation rate |
|------------------------|----------------|----------------|----------------------------|--------------|----------------|---------------------|--------------------------------------|-------------------|--------------------|
|                        | Full-time      | Total          | Looking for full-time work | Total        |                |                     |                                      |                   |                    |
|                        | '000           | '000           | '000                       | '000         | '000           | '000                | '000                                 | %                 | %                  |
| MALES                  |                |                |                            |              |                |                     |                                      |                   |                    |
| Family member          | 3 398.2        | 3 855.4        | 283.5                      | 327.6        | 4 183.0        | 1 409.4             | 5 592.4                              | 7.8               | 74.8               |
| Husband                |                |                |                            |              |                |                     |                                      |                   |                    |
| With dependants        | 1 704.1        | 1 797.9        | 99.5                       | 105.6        | 1 903.5        | 137.7               | 2 041.3                              | 5.5               | 93.3               |
| Without dependants     | 1 077.5        | 1 193.1        | 54.9                       | 60.0         | 1 253.1        | 843.0               | 2 096.1                              | 4.8               | 59.8               |
| Total husband          | 2 781.6        | 2 991.0        | 154.3                      | 165.6        | 3 156.6        | 980.7               | 4 137.3                              | 5.2               | 76.3               |
| Lone parent            |                |                |                            |              |                |                     |                                      |                   |                    |
| With dependants        | 35.8           | 43.5           | 4.8                        | 5.9          | 49.5           | 16.2                | 65.7                                 | 12.0              | 75.3               |
| Without dependants     | 19.8           | 21.9           | *2.3                       | *2.3         | 24.2           | 22.2                | 46.4                                 | *9.4              | 52.1               |
| Total lone parent      | 55.6           | 65.4           | 7.0                        | 8.2          | 73.6           | 38.5                | 112.1                                | 11.2              | 65.7               |
| Dependent student(b)   | 3.7            | 147.0          | 5.1                        | 31.9         | 178.9          | 260.4               | 439.4                                | 17.8              | 40.7               |
| Non-dependent child(c) | 485.2          | 567.8          | 102.6                      | 105.7        | 673.5          | 78.4                | 752.0                                | 15.7              | 89.6               |
| Other family person    | 72.1           | 84.2           | 14.5                       | 16.0         | 100.2          | 51.3                | 151.6                                | 16.0              | 66.1               |
| Non-family member      | 661.4          | 765.1          | 85.7                       | 91.4         | 856.5          | 335.6               | 1 192.2                              | 10.7              | 71.8               |
| Lone person            | 357.5          | 403.5          | 42.2                       | 44.3         | 447.8          | 255.3               | 703.1                                | 9.9               | 63.7               |
| Not living alone       | 303.9          | 361.6          | 43.5                       | 47.1         | 408.7          | 80.4                | 489.1                                | 11.5              | 83.6               |
| <b>Total</b>           | <b>4 059.7</b> | <b>4 620.5</b> | <b>369.3</b>               | <b>419.0</b> | <b>5 039.5</b> | <b>1 745.0</b>      | <b>6 784.5</b>                       | <b>8.3</b>        | <b>74.3</b>        |
| FEMALES                |                |                |                            |              |                |                     |                                      |                   |                    |
| Family member          | 1 572.0        | 2 989.4        | 158.3                      | 247.8        | 3 237.2        | 2 506.4             | 5 743.5                              | 7.7               | 56.4               |
| Wife                   |                |                |                            |              |                |                     |                                      |                   |                    |
| With dependants        | 510.9          | 1 176.7        | 39.0                       | 68.3         | 1 245.0        | 743.3               | 1 979.3                              | 5.5               | 62.9               |
| Without dependants     | 608.7          | 965.9          | 36.0                       | 45.0         | 1 010.9        | 1 048.9             | 2 059.8                              | 4.5               | 49.1               |
| Total wife             | 1 119.6        | 2 142.6        | 75.0                       | 113.3        | 2 255.9        | 1 793.2             | 4 039.1                              | 5.0               | 55.9               |
| Lone parent            |                |                |                            |              |                |                     |                                      |                   |                    |
| With dependants        | 96.6           | 193.2          | 24.5                       | 39.4         | 232.7          | 210.9               | 443.6                                | 17.0              | 52.5               |
| Without dependants     | 35.0           | 50.6           | 3.6                        | 4.6          | 55.2           | 103.9               | 159.1                                | 8.4               | 34.7               |
| Total lone parent      | 131.6          | 243.8          | 28.1                       | 44.1         | 287.9          | 314.9               | 602.7                                | 15.3              | 47.8               |
| Dependent student(b)   | *2.5           | 187.5          | 4.6                        | 34.5         | 222.1          | 242.3               | 464.4                                | 15.5              | 47.8               |
| Non-dependent child(c) | 270.8          | 351.6          | 41.3                       | 44.2         | 395.7          | 50.8                | 446.6                                | 11.2              | 88.6               |
| Other family person    | 47.5           | 63.8           | 9.3                        | 11.8         | 75.6           | 115.1               | 190.8                                | 15.6              | 39.7               |
| Non-family member      | 371.4          | 503.9          | 47.8                       | 52.8         | 556.7          | 628.4               | 1 185.2                              | 9.5               | 47.0               |
| Lone person            | 187.7          | 253.2          | 25.5                       | 28.2         | 281.3          | 543.4               | 824.8                                | 10.0              | 34.1               |
| Not living alone       | 183.8          | 250.8          | 22.2                       | 24.6         | 275.4          | 85.0                | 360.4                                | 8.9               | 76.4               |
| <b>Total</b>           | <b>1 943.5</b> | <b>3 493.3</b> | <b>206.1</b>               | <b>300.6</b> | <b>3 793.9</b> | <b>3 134.8</b>      | <b>6 928.7</b>                       | <b>7.9</b>        | <b>54.8</b>        |
| PERSONS                |                |                |                            |              |                |                     |                                      |                   |                    |
| Family member          | 4 970.3        | 6 844.8        | 441.9                      | 575.4        | 7 420.2        | 3 915.7             | 11 335.9                             | 7.8               | 65.5               |
| Husband or wife        |                |                |                            |              |                |                     |                                      |                   |                    |
| With dependants        | 2 215.0        | 2 974.6        | 138.5                      | 173.9        | 3 148.5        | 872.0               | 4 020.6                              | 5.5               | 78.3               |
| Without dependants     | 1 686.2        | 2 159.0        | 90.9                       | 105.0        | 2 264.0        | 1 891.9             | 4 155.9                              | 4.6               | 54.5               |
| Total husband or wife  | 3 901.2        | 5 133.6        | 229.4                      | 278.9        | 5 412.5        | 2 763.9             | 8 176.5                              | 5.2               | 66.2               |
| Lone parent            |                |                |                            |              |                |                     |                                      |                   |                    |
| With dependants        | 132.4          | 236.8          | 29.3                       | 45.4         | 282.1          | 227.2               | 509.3                                | 16.1              | 55.4               |
| Without dependants     | 54.8           | 72.5           | 5.8                        | 6.9          | 79.4           | 126.2               | 205.5                                | 8.7               | 38.6               |
| Total lone parent      | 187.2          | 309.2          | 35.1                       | 52.3         | 361.5          | 353.3               | 714.8                                | 14.5              | 50.6               |
| Dependent student(b)   | 6.3            | 334.6          | 9.8                        | 66.5         | 401.0          | 502.7               | 903.7                                | 16.6              | 44.4               |
| Non-dependent child(c) | 756.0          | 919.3          | 143.9                      | 149.9        | 1 069.3        | 129.3               | 1 198.5                              | 14.0              | 89.2               |
| Other family person    | 119.6          | 148.1          | 23.7                       | 27.8         | 175.9          | 166.5               | 342.4                                | 15.8              | 51.4               |
| Non-family member      | 1 032.9        | 1 269.0        | 133.5                      | 144.2        | 1 413.3        | 964.1               | 2 377.3                              | 10.2              | 59.4               |
| Lone person            | 545.2          | 656.7          | 67.7                       | 72.4         | 729.1          | 798.7               | 1 527.8                              | 9.9               | 47.7               |
| Not living alone       | 487.7          | 612.4          | 65.8                       | 71.8         | 684.2          | 165.3               | 849.5                                | 10.5              | 80.5               |
| <b>Total</b>           | <b>6 003.1</b> | <b>8 113.8</b> | <b>575.4</b>               | <b>719.6</b> | <b>8 833.4</b> | <b>4 879.8</b>      | <b>13 713.2</b>                      | <b>8.1</b>        | <b>64.4</b>        |

(a) Civilians who were residents of households where family status was determined. (b) Excludes persons aged 20–24 attending school. Also excludes sons or daughters aged 15–24 who are classified as husbands, wives or lone parents. (c) Aged 15 and over.

Source: Labour Force Status and Other Characteristics of Families, Australia (6224.0).

## Employment

Broadly, people are considered to be employed if they are doing any work at all. Those people who have a job or a business but did not actually work in the reference week are also considered to be employed. Employment statistics are presented according to the demographic characteristics of employed persons, their occupation and industry, hours worked and whether they are full-time or part-time workers. Data for employees, whether they work in the private or government sector, and estimates for apprentices and qualified tradespersons, are also included in this section.

By relating employment levels to population levels, the magnitude of job growth in the

economy can be evaluated. The measure relating these two levels is the employment/population ratio. Its usefulness lies in the fact that, while movements in the employment level reflect net changes in the levels of persons holding jobs, movements in the ratio reflect net changes in the number of jobholders relative to changes in the size of the population. In recent years the greatest change in employment/population ratios has been for the 15–19 age group, with the employment/population ratio increasing from 42.5% in 1991–92 to 47.0% in 1995–96 before falling to 46.8% in 1996–97. Overall, the employment/population ratio has declined slightly to 58.0% in 1996–97, reflecting small falls in the ratio for most age groups (table 6.7).

**6.7 EMPLOYED PERSONS, Employment/Population Ratios(a)**

|                   | 1991–92     | 1992–93     | 1993–94     | 1994–95     | 1995–96     | 1996–97     |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Age group (years) | %           | %           | %           | %           | %           | %           |
| <b>MALES</b>      |             |             |             |             |             |             |
| 15–19             | 42.6        | 41.0        | 42.8        | 45.9        | 46.2        | 46.4        |
| 20–24             | 73.1        | 72.2        | 72.9        | 76.2        | 76.1        | 75.3        |
| 25–34             | 84.3        | 83.0        | 83.6        | 84.8        | 86.0        | 85.5        |
| 35–44             | 86.8        | 85.9        | 85.9        | 86.3        | 87.0        | 86.4        |
| 45–54             | 83.5        | 82.8        | 82.3        | 83.6        | 83.5        | 82.8        |
| 55–59             | 65.9        | 64.4        | 64.6        | 66.1        | 66.0        | 66.5        |
| 60–64             | 43.7        | 41.2        | 41.2        | 43.1        | 42.7        | 42.1        |
| Over 64           | 8.9         | 8.4         | 8.8         | 9.5         | 9.4         | 9.5         |
| <b>Total</b>      | <b>66.3</b> | <b>65.3</b> | <b>65.6</b> | <b>67.0</b> | <b>67.4</b> | <b>66.9</b> |
| <b>FEMALES</b>    |             |             |             |             |             |             |
| 15–19             | 42.4        | 42.3        | 42.3        | 47.2        | 47.8        | 47.2        |
| 20–24             | 66.6        | 65.6        | 66.8        | 68.8        | 69.8        | 68.4        |
| 25–34             | 59.9        | 59.1        | 60.4        | 62.3        | 62.9        | 62.7        |
| 35–44             | 66.8        | 65.5        | 64.7        | 66.4        | 67.6        | 67.1        |
| 45–54             | 59.2        | 60.8        | 61.4        | 62.7        | 64.0        | 64.3        |
| 55–59             | 34.0        | 34.6        | 35.3        | 36.6        | 39.0        | 40.0        |
| 60–64             | 14.5        | 14.2        | 15.4        | 15.7        | 17.1        | 18.0        |
| Over 64           | 2.4         | 2.1         | 2.6         | 2.4         | 2.7         | 2.8         |
| <b>Total</b>      | <b>46.9</b> | <b>46.6</b> | <b>47.0</b> | <b>48.6</b> | <b>49.5</b> | <b>49.3</b> |
| <b>PERSONS</b>    |             |             |             |             |             |             |
| 15–19             | 42.5        | 41.6        | 42.5        | 46.5        | 47.0        | 46.8        |
| 20–24             | 69.8        | 69.0        | 72.5        | 72.5        | 73.0        | 71.9        |
| 25–34             | 72.1        | 71.0        | 71.9        | 73.4        | 74.4        | 74.1        |
| 35–44             | 76.8        | 75.7        | 75.2        | 76.3        | 77.2        | 76.6        |
| 45–54             | 71.6        | 72.0        | 72.1        | 73.4        | 73.9        | 73.7        |
| 55–59             | 50.1        | 49.7        | 50.2        | 51.6        | 52.7        | 53.5        |
| 60–64             | 29.1        | 27.6        | 28.3        | 29.4        | 29.9        | 30.0        |
| Over 64           | 5.2         | 4.8         | 5.2         | 5.5         | 5.6         | 5.7         |
| <b>Total</b>      | <b>56.5</b> | <b>55.8</b> | <b>56.2</b> | <b>57.7</b> | <b>58.3</b> | <b>58.0</b> |

(a) Employment/population ratio for any group is the number of employed persons expressed as a percentage of the civilian population aged 15 and over in the same group.

Source: *Labour Force, Australia* (6203.0).

Information for employed persons can be shown according to their status in employment (i.e. employers, own-account workers, employees and contributing family workers). The number of employers and own-account workers fell in 1996–97 to 339,600 and 821,300 respectively, after generally rising since 1991–92. Estimates of employees have steadily increased since 1992–93, to 7,126,100 in 1996–97 (table 6.8).

Full-time workers are those who worked 35 hours or more during the reference week of

the Labour Force Survey or who usually work 35 hours or more a week. Part-time workers are those who usually work less than 35 hours a week and who did so during the reference week. In 1996–97, there were 4,209,200 males employed full-time (88.3% of male employment), whereas the number of females employed full-time was 2,070,600 (57.1% of female employment). For males, part-time work is concentrated among younger (aged 15–24) and older (aged 55 and over) males, while for females, part-time work is common across all age groups (table 6.9).

### 6.8 EMPLOYED PERSONS, Status in Employment

|                             | 1991–92        | 1992–93        | 1993–94        | 1994–95        | 1995–96        | 1996–97        |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                             | '000           | '000           | '000           | '000           | '000           | '000           |
| Employers                   | 347.9          | 339.3          | 348.3          | 355.6          | 363.9          | 339.6          |
| Own-account workers         | 796.5          | 816.8          | 829.0          | 822.9          | 849.1          | 821.3          |
| Employees                   | 6 405.9        | 6 363.1        | 6 500.3        | 6 802.1        | 6 998.9        | 7 126.1        |
| Contributing family workers | 73.0           | 81.9           | 77.8           | 77.3           | 75.4           | 75.9           |
| <b>Total</b>                | <b>7 623.3</b> | <b>7 601.1</b> | <b>7 755.3</b> | <b>8 057.9</b> | <b>8 287.2</b> | <b>8 362.9</b> |

Source: Labour Force, Australia (6203.0).

### 6.9 EMPLOYED PERSONS, Full-time and Part-time Workers by Age, Annual Average — 1996–97

|                   | Age group (years) |              |                |                |              |              |              |             | Total          |
|-------------------|-------------------|--------------|----------------|----------------|--------------|--------------|--------------|-------------|----------------|
|                   | 15–19             | 20–24        | 25–34          | 35–44          | 45–54        | 55–59        | 60–64        | Over 64     |                |
|                   | '000              | '000         | '000           | '000           | '000         | '000         | '000         | '000        | '000           |
| <b>MALES</b>      |                   |              |                |                |              |              |              |             |                |
| Full-time workers | 148.1             | 434.7        | 1 134.4        | 1 135.0        | 928.0        | 254.8        | 121.6        | 52.6        | <b>4 209.2</b> |
| Part-time workers | 156.5             | 94.0         | 79.0           | 68.1           | 59.6         | 31.9         | 27.7         | 39.1        | <b>556.0</b>   |
| <b>Total</b>      | <b>304.6</b>      | <b>528.7</b> | <b>1 213.4</b> | <b>1 203.1</b> | <b>987.7</b> | <b>286.8</b> | <b>149.4</b> | <b>91.7</b> | <b>4 765.2</b> |
| <b>FEMALES</b>    |                   |              |                |                |              |              |              |             |                |
| Full-time workers | 80.8              | 318.8        | 591.5          | 518.3          | 437.7        | 84.7         | 28.2         | 10.5        | <b>2 070.6</b> |
| Part-time workers | 213.8             | 149.4        | 308.8          | 428.8          | 310.1        | 81.8         | 35.9         | 24.7        | <b>1 553.3</b> |
| <b>Total</b>      | <b>294.6</b>      | <b>468.2</b> | <b>900.4</b>   | <b>947.1</b>   | <b>747.8</b> | <b>166.5</b> | <b>64.0</b>  | <b>35.2</b> | <b>3 623.9</b> |

Source: Labour Force, Australia (6203.0).

Tables 6.10 and 6.11 provide information on the number of employed persons and the proportion employed, by industry and occupation. The Retail trade and Manufacturing industries are the two largest employing industries, followed by Property and business services, and Health and community services.

The number of persons employed by occupation is highest for Professionals, and Intermediate clerical, sales and service workers, both of which also have the highest proportion of females employed. The largest occupation group of male workers are Tradespersons and related workers.

**6.10 EMPLOYED PERSONS BY INDUSTRY, Annual Average — 1996–97**

| Industry                              | Males          |                     | Females        |                     | Persons        |                     |
|---------------------------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|
|                                       | No.            | Proportion employed | No.            | Proportion employed | No.            | Proportion employed |
|                                       | '000           | %                   | '000           | %                   | '000           | %                   |
| Agriculture, forestry and fishing     | 296.9          | 6.3                 | 130.1          | 3.6                 | 427.0          | 5.1                 |
| Mining                                | 75.9           | 1.6                 | 10.8           | 0.3                 | 86.7           | 1.0                 |
| Manufacturing                         | 831.1          | 17.5                | 298.8          | 8.3                 | 1 129.8        | 13.5                |
| Electricity, gas and water supply     | 56.6           | 1.2                 | 10.1           | 0.3                 | 66.7           | 0.8                 |
| Construction                          | 506.8          | 10.7                | 80.1           | 2.2                 | 586.8          | 7.0                 |
| Wholesale trade                       | 341.5          | 7.2                 | 151.0          | 4.2                 | 492.5          | 5.9                 |
| Retail trade                          | 609.7          | 12.8                | 628.1          | 17.4                | 1 237.7        | 14.8                |
| Accommodation, cafes and restaurants  | 172.6          | 3.6                 | 226.6          | 6.3                 | 399.1          | 4.8                 |
| Transport and storage                 | 305.2          | 6.4                 | 91.1           | 2.5                 | 396.3          | 4.7                 |
| Communication services                | 111.4          | 2.3                 | 52.2           | 1.4                 | 163.5          | 2.0                 |
| Finance and insurance                 | 139.5          | 2.9                 | 177.3          | 4.9                 | 316.8          | 3.8                 |
| Property and business services        | 455.7          | 9.6                 | 371.8          | 10.3                | 827.5          | 9.9                 |
| Government administration and defence | 209.5          | 4.4                 | 159.6          | 4.4                 | 369.1          | 4.4                 |
| Education                             | 200.7          | 4.2                 | 381.2          | 10.5                | 581.9          | 7.0                 |
| Health and community services         | 174.9          | 3.7                 | 596.7          | 16.5                | 771.6          | 9.2                 |
| Cultural and recreational services    | 96.7           | 2.0                 | 95.9           | 2.7                 | 192.5          | 2.3                 |
| Personal and other services           | 162.2          | 3.4                 | 155.2          | 4.3                 | 317.4          | 3.8                 |
| <b>All industries</b>                 | <b>4 746.6</b> | <b>100.0</b>        | <b>3 616.3</b> | <b>100.0</b>        | <b>8 362.9</b> | <b>100.0</b>        |

Source: Labour Force, Australia (6203.0).

**6.11 EMPLOYED PERSONS BY OCCUPATION(a), Annual Average — 1996–97**

| Occupation                                       | Males          |                     | Females        |                     | Persons        |                     |
|--------------------------------------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|
|                                                  | No.            | Proportion employed | No.            | Proportion employed | No.            | Proportion employed |
|                                                  | '000           | %                   | '000           | %                   | '000           | %                   |
| Managers and administrators                      | 478.4          | 10.1                | 149.8          | 4.1                 | 628.2          | 7.5                 |
| Professionals                                    | 718.6          | 15.1                | 695.1          | 19.2                | 1 413.6        | 16.9                |
| Associate professionals                          | 561.1          | 11.8                | 328.2          | 9.1                 | 889.3          | 10.6                |
| Tradespersons and related workers                | 1 042.3        | 22.0                | 106.9          | 3.0                 | 1 149.1        | 13.7                |
| Advanced clerical and service workers            | 37.9           | 0.8                 | 352.6          | 9.8                 | 390.5          | 4.7                 |
| Intermediate clerical, sales and service workers | 396.9          | 8.4                 | 1 000.3        | 27.7                | 1 397.2        | 16.7                |
| Intermediate production and transport workers    | 681.2          | 14.4                | 107.4          | 3.0                 | 788.5          | 9.4                 |
| Elementary clerical, sales and service workers   | 303.0          | 6.4                 | 560.7          | 15.5                | 863.6          | 10.3                |
| Labourers and related workers                    | 527.4          | 11.1                | 315.5          | 8.7                 | 842.9          | 10.1                |
| <b>All occupations</b>                           | <b>4 746.6</b> | <b>100.0</b>        | <b>3 616.3</b> | <b>100.0</b>        | <b>8 362.9</b> | <b>100.0</b>        |

(a) Classified according to the Australian Standard Classification of Occupations (ASCO), Second edition.

Source: Labour Force, Australia (6203.0).

Tables 6.12 and 6.13, and graph 6.14, provide various views of the distribution of wage and salary earners between industries, between the private and public sectors, and across the States and Territories. It should be noted that these statistics are obtained from the Survey of Employment and Earnings conducted among employers; as such they are complementary to, but not compatible with, those from the household-based Labour Force Survey. While the latter provides better estimates of overall employment movements at the national and State/Territory levels, the former provides dissections by industry and public/private sector.

The number of wage and salary earners in the private and public sectors between February 1989 and 1997 is shown in graph 6.14. The number of wage and salary earners in the private sector grew steadily for a number of years to 4,855,900 in December 1989. From then the number declined to 4,434,700 in January 1992. There has since been an increase of 19.7% to 5,307,300 in February 1997.

After a peak of 1,755,200 in June 1990 the number of employees in the public sector has fallen to 1,457,700 in February 1997, a decrease of 16.9%.

### 6.12 WAGE AND SALARY EARNERS, Industry and Private/Public Sector

| Industry                                 | Private sector |                |                | Public sector  |                |                |
|------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                          | Feb 1995       | Feb 1996       | Feb 1997       | Feb 1995       | Feb 1996       | Feb 1997       |
|                                          | '000           | '000           | '000           | '000           | '000           | '000           |
| Agriculture, forestry and fishing(a)     | ..             | ..             | ..             | 5.3            | 5.5            | 5.5            |
| Mining                                   | 70.9           | 79.7           | 80.2           | 0.8            | 1.5            | 2.1            |
| Manufacturing                            | 950.6          | 942.0          | 937.6          | 14.5           | 10.3           | 4.8            |
| Electricity, gas and water supply        | 3.9            | 5.9            | 9.6            | 72.5           | 62.6           | 53.7           |
| Construction                             | 291.9          | 308.6          | 315.5          | 28.0           | 26.2           | 17.1           |
| Wholesale trade                          | 428.4          | 449.2          | 460.8          | 1.6            | 1.6            | 1.6            |
| Retail trade                             | 874.5          | 927.6          | 988.4          | 0.2            | 0.3            | 0.3            |
| Accommodation, cafes and restaurants     | 325.9          | 306.9          | 379.2          | 1.6            | 0.7            | 0.5            |
| Transport and storage                    | 206.2          | 254.8          | 230.4          | 97.2           | 71.1           | 68.4           |
| Communication services                   | 13.3           | 22.1           | 25.3           | 106.8          | 126.5          | 114.1          |
| Finance and insurance                    | 244.7          | 253.2          | 268.4          | 62.4           | 53.0           | 9.4            |
| Property and business services           | 671.9          | 656.1          | 677.8          | 46.7           | 45.3           | 33.6           |
| Government administration and defence(b) | ..             | ..             | ..             | 334.6          | 342.8          | 339.1          |
| Education                                | 171.0          | 179.9          | 161.3          | 366.0          | 372.1          | 395.8          |
| Health and community services            | 408.6          | 438.3          | 462.8          | 300.6          | 302.0          | 300.3          |
| Cultural and recreational services       | 144.3          | 146.2          | 139.1          | 25.1           | 29.3           | 26.1           |
| Personal and other services              | 173.5          | 177.7          | 170.8          | 82.0           | 86.6           | 85.8           |
| <b>All industries</b>                    | <b>4 979.6</b> | <b>5 148.1</b> | <b>5 307.3</b> | <b>1 545.9</b> | <b>1 537.3</b> | <b>1 457.7</b> |

(a) Out of scope of survey for private sector. (b) Excludes members of permanent defence forces and employees of overseas embassies, consulates etc.

Source: *Wage and Salary Earners, Australia* (6248.0).

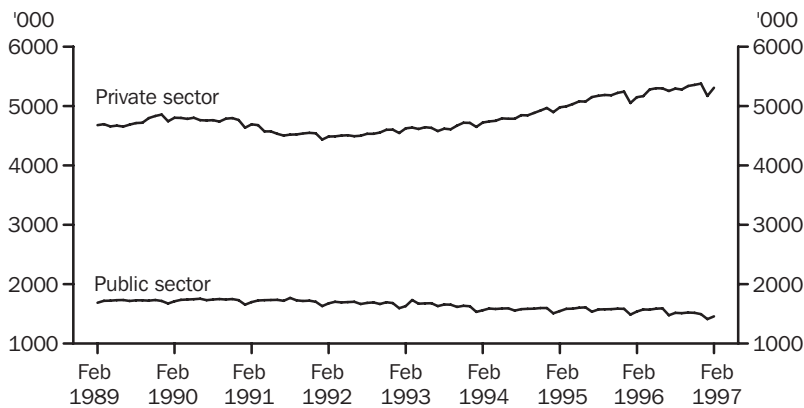
### 6.13 WAGE AND SALARY EARNERS, Private/Public Sector — February 1997

|              | NSW            | Vic.           | Qld            | SA           | WA           | Tas.         | NT          | ACT          | Aust.          |
|--------------|----------------|----------------|----------------|--------------|--------------|--------------|-------------|--------------|----------------|
| Sector       | '000           | '000           | '000           | '000         | '000         | '000         | '000        | '000         | '000           |
| Private      | 1 892.1        | 1 390.4        | 872.7          | 382.9        | 528.3        | 120.6        | 48.2        | 72.1         | 5 307.3        |
| Public       |                |                |                |              |              |              |             |              |                |
| Commonwealth | 82.6           | 66.7           | 38.8           | 21.2         | 19.9         | 6.7          | 4.4         | 50.6         | 290.9          |
| State        | 343.3          | 211.0          | 203.4          | 86.2         | 111.8        | 30.6         | 15.8        | 16.7         | 1 018.9        |
| Local        | 45.4           | 38.1           | 36.5           | 8.2          | 13.6         | 4.2          | 1.9         | —            | 148.0          |
| Total        | 471.3          | 315.8          | 278.8          | 115.5        | 145.3        | 41.6         | 22.1        | 67.3         | 1 457.7        |
| <b>Total</b> | <b>2 363.4</b> | <b>1 706.2</b> | <b>1 151.4</b> | <b>498.4</b> | <b>673.6</b> | <b>162.2</b> | <b>70.4</b> | <b>139.4</b> | <b>6 765.0</b> |

Source: *Wage and Salary Earners, Australia* (6248.0).



6.14 WAGE AND SALARY EARNERS, Private/Public Sector



Source: *Wage and Salary Earners, Australia* (6248.0).

### Labour mobility

Labour mobility refers to a change of employer/business by workers or a change in locality of their employment, in a specific 12 month period. Labour mobility data are an important source of information on the dynamic nature of the labour force.

Of persons who worked at some time during the year ending February 1996, 24% were classified as being 'job mobile', that is, they had changed their job/business or locality of work. In recent years job mobility levels have been rising, from a low point of 19.7% in February 1992. Between 1987 and 1990, job mobility levels were higher for males than females. However, in the surveys conducted after 1991, females showed slightly higher proportions of job mobility.

Table 6.15 shows that in the 12 months ending February 1996 there were an estimated 9,141,900 persons aged 15–69 years who had worked at some time during the year. Of these, 91% were working at February 1996, 4% were looking for work and 5% were not in the labour force.

By age, labour mobility was greatest for persons aged 20–24 years (34%, up from 28% in February 1994) and lowest for those aged 55–69 years (13%, up from 9% in February 1994).

Labour mobility for persons with post-school qualifications (27%) was higher than for persons without post-school qualifications (23%) and persons still at school (17%).

Of the 7,489,100 persons who were working both in February 1995 and in February 1996, 85% had been in the same job for the entire year. Of the remainder who changed jobs, 57% changed to another job in the same industry and 43% changed to a job in a different industry. By industry, persons working in Agriculture, forestry and fishing were most likely to stay in their current job for the full year (90%), while persons employed in Accommodation, cafes and restaurants were the least likely (74%). By occupation, Managers and administrators had the highest proportion of persons staying in their current job for the full year (90%) and Salespersons and personal service workers had the lowest proportion (79%).

Some 2,104,200 (23%) persons who had worked at some time during the year, ceased a job during the year. Of these, 65% were job leavers and 35% were job losers. Over half (57%) of job losers were retrenched and, of those retrenched, 51% had been in their last job for less than one year.

## 6.15 LABOUR MOBILITY, February

|                                              | Unit | 1990    | 1991    | 1992    | 1994    | 1996    |
|----------------------------------------------|------|---------|---------|---------|---------|---------|
| <b>MALES</b>                                 |      |         |         |         |         |         |
| Changed employer/business                    | %    | 18.3    | 18.6    | 16.1    | 18.3    | 20.8    |
| Changed locality but not employer/business   | %    | 3.7     | 3.3     | 3.3     | 3.4     | 3.4     |
| Changed employer/business or locality        | %    | 22.0    | 21.9    | 19.4    | 21.7    | 24.2    |
| Did not change employer/business or locality | %    | 78.0    | 78.1    | 80.6    | 78.3    | 75.8    |
| Total labour force                           | %    | 100.0   | 100.0   | 100.0   | 100.0   | 100.0   |
| <b>Total</b>                                 | '000 | 4 927.6 | 4 946.0 | 4 880.1 | 4 842.1 | 5 112.1 |
| <b>FEMALES</b>                               |      |         |         |         |         |         |
| Changed employer/business                    | %    | 19.0    | 19.2    | 17.3    | 19.6    | 21.7    |
| Changed locality but not employer/business   | %    | 3.0     | 2.7     | 2.9     | 2.9     | 2.8     |
| Changed employer/business or locality        | %    | 22.0    | 21.9    | 20.1    | 22.5    | 24.5    |
| Did not change employer/business or locality | %    | 78.0    | 78.1    | 79.9    | 77.5    | 75.5    |
| Total labour force                           | %    | 100.0   | 100.0   | 100.0   | 100.0   | 100.0   |
| <b>Total</b>                                 | '000 | 3 700.4 | 3 719.5 | 3 684.0 | 3 760.3 | 4 029.8 |
| <b>PERSONS</b>                               |      |         |         |         |         |         |
| Changed employer/business                    | %    | 18.6    | 18.8    | 16.6    | 18.9    | 21.2    |
| Changed locality but not employer/business   | %    | 3.4     | 3.1     | 3.1     | 3.2     | 3.1     |
| Changed employer/business or locality        | %    | 22.0    | 21.9    | 19.7    | 22.1    | 24.3    |
| Did not change employer/business or locality | %    | 78.0    | 78.1    | 80.3    | 77.9    | 75.7    |
| Total labour force                           | %    | 100.0   | 100.0   | 100.0   | 100.0   | 100.0   |
| <b>Total</b>                                 | '000 | 8 628.0 | 8 665.5 | 8 564.1 | 8 602.3 | 9 141.9 |

Source: Multiple Jobholding, Australia (6216.0).

## Persons employed at home

The ABS survey of persons employed at home collects information on the size and characteristics of that part of the labour force which is engaged in home-based employment. Structural change in the economy and rapid technological change suggest that the incidence and variety of home-based employment is increasing.

Table 6.16 shows that, in September 1995, 343,300 persons aged 15 and over were employed at home, that is, they worked more hours at home than elsewhere in their main or second job. This group represents 4.1% of all employed persons, compared with 4.0% in March 1992 and 3.5% in April 1989.

The most common reason for commencing work at home, given by 27% of persons employed at home, was 'to open/operate own/family business'. Other common reasons were 'wanted office at home/no overheads/no rent' (18%) and 'children too young/preferred to look after children' (17%).

Almost two-thirds (225,500) of persons employed at home usually worked less than

35 hours a week at home, while 97,500 persons (28%) worked 40 hours and over. Some 49% of men employed at home worked 40 hours and over compared with 18% of women.

As graph 6.17 shows, the largest occupation group (39%) of persons at home was clerks. Almost all clerks employed at home were women (96% or 127,400).

Almost 37% of all persons employed at home were employees. Of this group:

- 35% usually worked 35 hours or more at home (compared with 64% of all employees);
- 69% were temporary employees (compared with 24% of all employees);
- 72% were not provided with paid sick leave and 71% were not provided with paid holiday leave (compared with 26% for each type of leave for all employees);
- 58% were covered by superannuation provided by their current employer (compared with 78% of all employees); and
- 3.7% were members of a trade union (compared with 33% for all employees).

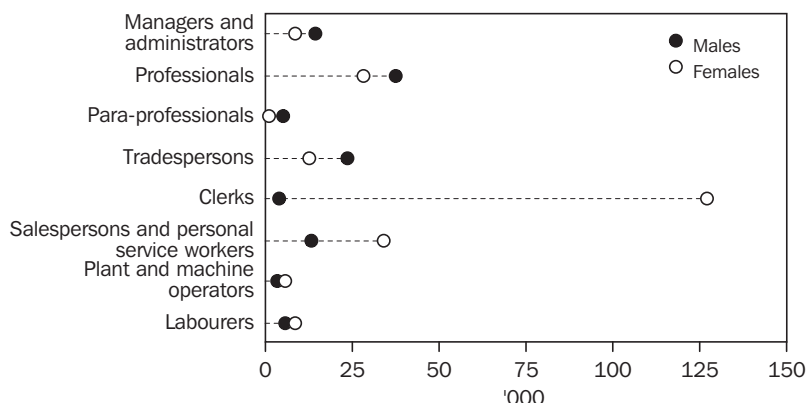
## 6.16 EMPLOYED PERSONS, Whether Employed at Home

|                                                  | April 1989     |                |                | March 1992     |                |                | September 1995 |                |                |
|--------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                                  | Males          | Females        | Persons        | Males          | Females        | Persons        | Males          | Females        | Persons        |
|                                                  | '000           | '000           | '000           | '000           | '000           | '000           | '000           | '000           | '000           |
| Worked no hours at home                          | 3 475.5        | 2 457.6        | 5 933.0        | 3 232.3        | 2 434.8        | 5 667.1        | 3 465.2        | 2 726.4        | 6 191.5        |
| Worked some hours at home(a)                     | 1 088.2        | 662.0          | 1 750.2        | 1 226.9        | 810.5          | 2 037.4        | 1 269.0        | 880.1          | 2 149.0        |
| Usually worked less hours at home than elsewhere | 849.6          | 398.5          | 1 248.1        | 971.3          | 515.6          | 1 486.8        | 1 022.2        | 568.3          | 1 590.5        |
| Persons employed at home                         | 80.3           | 186.2          | 266.6          | 101.2          | 206.7          | 307.9          | 112.6          | 230.7          | 343.3          |
| <b>Total</b>                                     | <b>4 563.7</b> | <b>3 119.6</b> | <b>7 683.3</b> | <b>4 459.2</b> | <b>3 245.3</b> | <b>7 704.4</b> | <b>4 734.2</b> | <b>3 606.4</b> | <b>8 340.6</b> |

(a) Includes persons comprising farmers who worked more hours at home than away and persons who worked less than one hour at home.

Source: *Persons Employed at Home, Australia* (6275.0).

## 6.17 PERSONS EMPLOYED AT HOME, Occupation — September 1995



Source: *Persons Employed at Home, Australia* (6275.0).

## Underemployed workers

At the broadest level, underemployment is a preference to work more hours by persons who are not working full-time hours. The number of underemployed workers is an important indicator of labour market performance. It highlights the unsatisfied aspirations of many workers for adequate work and greater earnings.

Part-time workers are considered to be involuntary part-time workers if they prefer to work more hours. Full-time workers are also considered to be involuntary part-time if they worked less than 35 hours in the reference week for economic reasons (such as being stood down, insufficient work or on 'short time').

In September 1996 there were 8,429,600 employed persons aged 15 and over. Of these,

6% (546,500) were involuntary part-time workers and 94% (7,883,100) were fully employed.

Persons who were classified as fully employed were those working full-time hours; those voluntarily working part-time hours; and those full-time workers who worked part-time hours in the reference week for non-economic reasons (such as taking holiday or sick leave).

Graph 6.18 shows a 10-year time series for employed persons who worked part-time but would prefer to work more hours. Some correlation exists between the economic cycle and involuntary part-time work. Comparing the proportion of the labour force identified as involuntary part-time workers with the trend unemployment rate between September 1986 and September 1996, a similar trough around 1988 and 1989 and peaks in 1992 and 1993 are apparent.

6.18 PROPORTION OF LABOUR FORCE, September



Source: Labour Force, Australia (6203.0).

Of all involuntary workers, 56% were female and the remaining 44% were male. The proportion of male involuntary part-time workers has been increasing over time, from 34% recorded in May 1985.

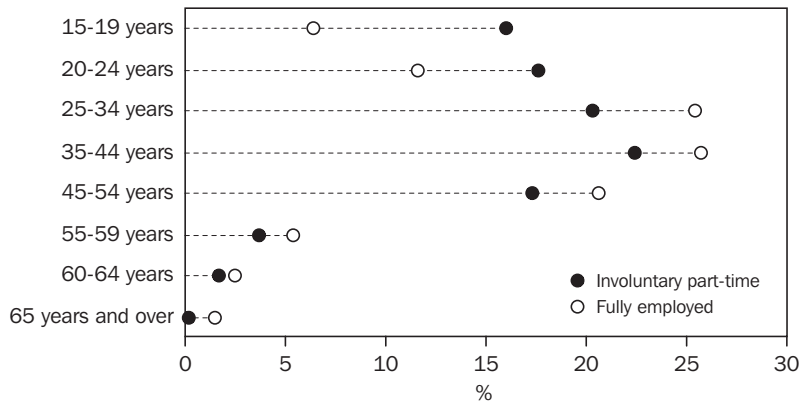
For involuntary part-time workers, the duration of insufficient work (or the length of time they have been working involuntarily for less than 35 hours) has been increasing since the mid 1980s. In May 1985 the median duration of insufficient work was 12 weeks. In September 1996 this had increased to 26 weeks (19 weeks for males and 26 weeks for females).

Persons in older age groups generally experienced longer periods of insufficient work. For males, the median duration ranged from 12 weeks for those aged 25–34 years to 104 weeks for those aged 65 years and over. Similarly for females, the median duration ranged from

16 weeks for those aged 15–19 years to 78 weeks for those aged 60–64 years.

The proportion of involuntary part-time workers in older age groups has been increasing since the mid 1980s. In May 1985, some 17% were aged 45 years and over. By September 1996 this proportion had increased to 23%. On the whole, however, involuntary part-time workers tend to be younger than their fully employed counterparts. In September 1996, over half (54%) of all involuntary part-time workers were under 35 years of age, while only 44% of fully employed workers were under 35. As graph 6.19 shows, there was a higher proportion of involuntary part-time workers than fully employed workers in the age groups 15–19 years and 20–24 years. In all other age groups there was a higher proportion of fully employed workers than involuntary part-time workers.

**6.19 DISTRIBUTION OF INVOLUNTARY PART-TIME WORKERS AND FULLY EMPLOYED WORKERS, By Age — September 1996**



Source: *Underemployed Workers, Australia* (6265.0).

## Unemployment

Persons are considered to be unemployed if they satisfy three criteria: not employed, available for work, and taking active steps to find work.

The two most important unemployment measures are the number of persons unemployed and the unemployment rate. The unemployment rate is defined as the number of unemployed expressed as a percentage of the labour force.

The annual average number of unemployed persons peaked at 940,500 in 1992–93 before falling to 766,700 in 1995–96. In 1996–97, the number of unemployed persons rose to 796,500 (table 6.20).

The number of persons unemployed for 52 weeks or more peaked in 1992–93 at 336,300, before falling to 226,500 in 1995–96, then rising slightly to 233,100 in 1996–97. Of all unemployed persons in 1996–97, 29.3% had been unemployed for 52 weeks or more compared with 35.8% in 1992–93 (table 6.20).

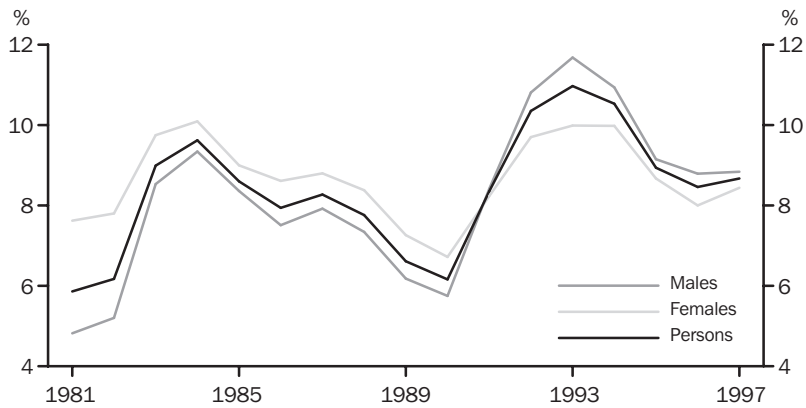
The annual average unemployment rate for males rose sharply from 8.4% in 1990–91 to 11.7% in 1992–93. By 1995–96, the average unemployment rate for males had fallen to 8.8% and remained at this level in 1996–97. For females, the unemployment rate rose from 8.2% in 1990–91 to 10.0% in 1992–93 and 1993–94. The rate then declined to 8.0% in 1995–96 before rising to 8.4% in 1996–97 (graph 6.21).

**6.20 UNEMPLOYED PERSONS, Duration of Unemployment — Annual Average**

|                                  | 1991–92      | 1992–93      | 1993–94      | 1994–95      | 1995–96      | 1996–97      |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Duration of unemployment (weeks) | '000         | '000         | '000         | '000         | '000         | '000         |
| Under 4                          | 122.9        | 121.7        | 124.5        | 123.3        | 129.2        | 135.5        |
| 4 and under 13                   | 179.6        | 173.0        | 169.6        | 159.4        | 167.7        | 178.3        |
| 13 and under 26                  | 143.3        | 134.0        | 127.2        | 110.6        | 116.7        | 116.1        |
| 26 and under 52                  | 180.2        | 175.4        | 159.3        | 127.7        | 126.6        | 133.5        |
| 52 and over                      | 255.7        | 336.3        | 334.8        | 273.6        | 226.5        | 233.1        |
| <b>Total</b>                     | <b>881.7</b> | <b>940.5</b> | <b>915.5</b> | <b>794.6</b> | <b>766.7</b> | <b>796.5</b> |

Source: *Labour Force, Australia* (6203.0).

6.21 UNEMPLOYMENT RATE, Annual Average



Source: Labour Force, Australia (6203.0).

By examining particular groups and characteristics of the unemployed, various economic and social aspects of unemployment can be analysed. While the above aggregate unemployment rates are important overall

indicators, such measures as full-time and part-time unemployment levels and rates for different age groups by sex and marital status, shown in table 6.22, provide additional perspectives.

## 6.22 UNEMPLOYED PERSONS, Age and Whether Looking for Full-time or Part-time Work, Annual Average — 1996–97

|                                                                 | No. unemployed |              |              | Unemployment rate |            |            |
|-----------------------------------------------------------------|----------------|--------------|--------------|-------------------|------------|------------|
|                                                                 | Males          | Females      | Persons      | Males             | Females    | Persons    |
|                                                                 | '000           | '000         | '000         | %                 | %          | %          |
| <b>LOOKING FOR FULL-TIME WORK</b>                               |                |              |              |                   |            |            |
| Aged 15–19                                                      | 53.4           | 37.0         | 90.3         | 26.5              | 31.3       | 28.2       |
| Looking for first job                                           | 30.0           | 22.3         | 52.2         | n.a.              | n.a.       | n.a.       |
| Attending school/tertiary educational institution full-time     | 6.1            | 5.8          | 11.9         | 43.7              | 53.3       | 47.8       |
| Not attending school/tertiary educational institution full-time | 47.3           | 31.1         | 78.5         | 25.2              | 29.0       | 26.6       |
| Aged 20–24                                                      | 76.0           | 49.6         | 125.6        | 14.9              | 13.5       | 14.3       |
| Looking for first job                                           | 17.2           | 17.0         | 34.2         | n.a.              | n.a.       | n.a.       |
| Attending a tertiary educational institution full-time          | 3.3            | 3.0          | 6.3          | 34.2              | 36.9       | 35.0       |
| Not attending a tertiary educational institution full-time      | 72.7           | 46.5         | 119.3        | 14.6              | 13.0       | 13.9       |
| Aged 25–34                                                      | 103.9          | 52.7         | 156.6        | 8.4               | 8.2        | 8.3        |
| Aged 35–44                                                      | 75.1           | 42.9         | 118.1        | 6.2               | 7.7        | 6.7        |
| Aged 45–54                                                      | 58.5           | 35.8         | 94.4         | 5.9               | 7.6        | 6.5        |
| Aged 55 and over                                                | 36.9           | 7.0          | 43.9         | 7.9               | 5.4        | 7.4        |
| <b>Total</b>                                                    | <b>403.8</b>   | <b>225.1</b> | <b>628.8</b> | <b>8.8</b>        | <b>9.8</b> | <b>9.1</b> |
| <b>LOOKING FOR PART-TIME WORK</b>                               |                |              |              |                   |            |            |
| Aged 15–19                                                      | 32.6           | 35.1         | 67.7         | 17.2              | 14.1       | 15.4       |
| Attending school/tertiary educational institution full-time     | 29.4           | 31.9         | 61.2         | 36.4              | 30.7       | 33.2       |
| Not attending school/tertiary educational institution full-time | 3.2            | 3.3          | 6.5          | 7.8               | 6.2        | 6.9        |
| Aged 20–24                                                      | 8.5            | 13.6         | 22.1         | 8.3               | 8.3        | 8.3        |
| Attending a tertiary educational institution full-time          | 5.8            | 6.5          | 12.3         | 12.9              | 10.8       | 11.7       |
| Not attending a tertiary educational institution full-time      | 2.8            | 7.1          | 9.8          | 4.9               | 7.0        | 6.2        |
| Aged 25–34                                                      | 5.6            | 23.6         | 29.1         | 6.6               | 7.1        | 7.0        |
| Aged 35–44                                                      | 4.2            | 20.4         | 24.6         | 5.8               | 4.5        | 4.7        |
| Aged 45–54                                                      | 2.9            | 12.8         | 15.6         | 4.6               | 4.0        | 4.1        |
| Aged 55 and over                                                | 4.8            | 3.7          | 8.5          | 4.6               | 2.6        | 3.4        |
| <b>Total</b>                                                    | <b>58.5</b>    | <b>109.2</b> | <b>167.7</b> | <b>9.5</b>        | <b>6.6</b> | <b>7.4</b> |

Source: Labour Force, Australia (6203.0).

### Job search experience

Two key aspects of a person's search for work are the steps taken to find work, and barriers they encounter in obtaining work.

Characteristics such as age, sex and education of an individual looking for work can often influence their job search experience and outcomes.

Steps taken to find work can include registering with employment agencies and contacting prospective employers. Common difficulties in

finding work are being considered too young or too old by employers, the perception that there were too many applicants for available jobs, or there being no vacancies at all.

Table 6.23 shows that, in July 1996, almost three-quarters (74%) of unemployed persons were registered with the Commonwealth Employment Service (CES) and also contacted prospective employers. A further 20% contacted prospective employers but were not registered with the CES.

**6.23 UNEMPLOYED PERSONS, Active Steps Taken to Find Full-time or Part-time Work — July 1996**

|                                 | Looking for full-time work |              |              | Looking for part-time work |             |              | Total        |              |              |
|---------------------------------|----------------------------|--------------|--------------|----------------------------|-------------|--------------|--------------|--------------|--------------|
|                                 | Males                      | Females      | Persons      | Males                      | Females     | Persons      | Males        | Females      | Persons      |
| Active steps taken to find work | '000                       | '000         | '000         | '000                       | '000        | '000         | '000         | '000         | '000         |
| Registered with the CES and     |                            |              |              |                            |             |              |              |              |              |
| Took no other active steps      | *1.1                       | *1.8         | *2.9         | *0.0                       | *0.8        | *0.8         | *1.1         | *2.6         | *3.8         |
| Contacted prospective employers | 328.7                      | 151.2        | 479.9        | 13.9                       | 29.0        | 42.9         | 342.6        | 180.2        | 522.8        |
| Took other active steps         | 10.2                       | 6.4          | 16.6         | *2.3                       | *1.5        | *3.9         | 12.5         | 7.9          | 20.5         |
| Total                           | 340.1                      | 159.4        | 499.5        | 16.2                       | 31.4        | 47.6         | 356.3        | 190.8        | 547.1        |
| Not registered with the CES and |                            |              |              |                            |             |              |              |              |              |
| Contacted prospective employers | 24.7                       | 41.0         | 65.7         | 23.2                       | 53.3        | 76.5         | 48.0         | 94.2         | 142.2        |
| Took other active steps         | *2.4                       | *2.6         | 5.0          | *3.2                       | *4.3        | 7.4          | 5.6          | 6.9          | 12.4         |
| Total                           | 27.1                       | 43.6         | 70.7         | 26.4                       | 57.5        | 83.9         | 53.5         | 101.1        | 154.6        |
| <b>Total</b>                    | <b>367.2</b>               | <b>203.0</b> | <b>570.2</b> | <b>42.6</b>                | <b>88.9</b> | <b>131.5</b> | <b>409.8</b> | <b>291.9</b> | <b>701.7</b> |

Source: Job Search Experience of Unemployed Persons, Australia (6222.0).

As table 6.24 shows, in July 1996 the most commonly reported main difficulties in finding work were 'considered too young or too old by employers' (13% of unemployed persons) and 'too many applicants for available jobs' (also 13%). Other common difficulties were 'no vacancies in line of work' (12%) and 'lacked necessary skills or education' (11%).

The main difficulties in finding work most commonly reported by the long-term unemployed were 'considered too young or too old by employers' (21%) and 'lacked necessary

skills or education' (12%). The majority (90%) of long-term unemployed persons in July 1996 had not received any offers of employment in the previous 12 months. This was slightly higher than in July 1995 when 86% had not received any offers of employment.

The average duration of unemployment for persons with post-school qualifications (males 50 weeks, females 45 weeks) was lower than for persons without post-school qualifications (males 64 weeks, females 52 weeks).

**6.24 UNEMPLOYED PERSONS(a), Main Difficulty in Finding Work and Duration of Current Period of Unemployment — July 1996**

|                                                             | Duration of current period of unemployment (weeks) |                |                 |                 |              | Total        | Average duration |
|-------------------------------------------------------------|----------------------------------------------------|----------------|-----------------|-----------------|--------------|--------------|------------------|
|                                                             | Under 4                                            | 4 and under 13 | 13 and under 26 | 26 and under 52 | 52 and over  |              |                  |
| Main difficulty in finding work                             | '000                                               | '000           | '000            | '000            | '000         | '000         | weeks            |
| Considered too young or too old by employers                | 7.4                                                | 13.9           | 13.2            | 16.3            | 44.0         | 94.7         | 80.7             |
| No vacancies at all                                         | 12.3                                               | 17.4           | 13.5            | 17.1            | 22.8         | 83.2         | 47.6             |
| No vacancies in line of work                                | 14.6                                               | 21.7           | 11.8            | 16.8            | 16.5         | 81.4         | 42.9             |
| Insufficient work experience                                | 8.8                                                | 12.6           | 11.6            | 18.3            | 19.4         | 70.7         | 43.8             |
| Too many applicants for available jobs                      | 10.4                                               | 20.7           | 13.7            | 21.3            | 25.2         | 91.2         | 41.5             |
| Lacked necessary skills or education                        | 7.2                                                | 16.2           | 11.1            | 18.8            | 24.4         | 77.7         | 53.9             |
| Too far to travel, transport problems                       | *4.3                                               | 10.7           | *4.3            | 8.1             | 9.3          | 36.8         | 49.2             |
| Own ill health or disability                                | 6.5                                                | 4.8            | *3.9            | 6.9             | 16.8         | 38.9         | 90.9             |
| Language difficulties                                       | *1.6                                               | *2.0           | *2.4            | *3.4            | 13.1         | 22.4         | 106.1            |
| Unsuitable hours                                            | *4.5                                               | 4.9            | *4.6            | *3.3            | *3.2         | 20.6         | 25.7             |
| Difficulties with child-care, other family responsibilities | *1.3                                               | *3.0           | *2.3            | *1.4            | *2.9         | 10.9         | 34.8             |
| Other difficulties(b)                                       | *2.6                                               | *4.5           | *4.1            | 7.7             | 8.3          | 27.2         | 63.4             |
| No difficulties reported                                    | 23.1                                               | 13.2           | *3.5            | *3.5            | *2.6         | 45.9         | 13.4             |
| <b>Total</b>                                                | <b>104.6</b>                                       | <b>145.6</b>   | <b>100.1</b>    | <b>142.8</b>    | <b>208.7</b> | <b>701.7</b> | <b>52.9</b>      |

(a) Excludes persons who had been stood down. (b) Includes persons who reported difficulties because of ethnic background.

Source: Job Search Experience of Unemployed Persons, Australia (6222.0).



## Job vacancies

Job vacancy statistics, taken together with unemployment statistics, help in assessing the demand for labour.

A job vacancy is a job available for immediate filling and for which recruitment action has been taken by the employer.

The estimated number of job vacancies in Australia peaked at 73,100 in May 1989 and then fell rapidly to a low of 24,300 in May 1992. In May 1997 the job vacancies level was 58,100 (see tables 6.25 and 6.26).

## Persons not in the labour force

Persons not in the labour force represent that group of the population who, during the reference week of a labour force survey, are neither employed nor unemployed — see diagram 6.1. Interest in this group centres primarily around their potential to participate in the labour force and their reasons for not participating.

Some persons not in the labour force are classified as marginally attached to the labour force because they want to work and may be

**6.25 JOB VACANCIES, States and Territories**

|                              | May 1992    | May 1993    | May 1994    | May 1995    | May 1996    | May 1997    |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| State/Territory              | '000        | '000        | '000        | '000        | '000        | '000        |
| New South Wales              | 6.5         | 12.9        | 17.7        | 23.9        | 24.5        | 19.6        |
| Victoria                     | 5.8         | 5.4         | 15.3        | 10.2        | 11.6        | 11.5        |
| Queensland                   | 5.1         | 4.9         | 6.1         | 6.1         | 7.3         | 12.1        |
| South Australia              | 1.4         | * 1.8       | * 2.4       | 3.3         | * 2.4       | 3.0         |
| Western Australia            | 3.2         | * 2.5       | 4.4         | 6.2         | 5.4         | * 8.6       |
| Tasmania                     | 0.6         | 0.4         | 0.8         | * 1.7       | * 0.8       | * 1.4       |
| Northern Territory           | 0.4         | * 0.6       | 0.7         | 1.0         | 0.9         | 0.9         |
| Australian Capital Territory | 1.3         | * 1.6       | * 1.9       | 1.3         | 0.8         | * 1.0       |
| <b>Australia</b>             | <b>24.3</b> | <b>30.2</b> | <b>49.4</b> | <b>53.7</b> | <b>53.6</b> | <b>58.1</b> |

Source: *Job Vacancies and Overtime, Australia* (6354.0).

**6.26 JOB VACANCIES, Industry**

|                                       | May 1993    | May 1994    | May 1995    | May 1996    | May 1997    |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Industry                              | '000        | '000        | '000        | '000        | '000        |
| Mining                                | 0.3         | 0.4         | 1.2         | * 2.8       | 1.2         |
| Manufacturing                         | 3.1         | 6.5         | 5.9         | 8.2         | 5.8         |
| Electricity, gas and water supply     | 0.1         | 0.2         | 0.2         | 0.2         | * 0.3       |
| Construction                          | * 2.0       | * 1.7       | * 3.5       | * 1.1       | * 4.6       |
| Wholesale trade                       | * 3.7       | * 3.3       | 4.4         | 2.2         | * 4.9       |
| Retail trade                          | * 4.6       | 8.4         | 7.1         | * 10.2      | * 6.9       |
| Accommodation, cafes and restaurants  | * 0.6       | * 1.3       | 3.5         | 2.8         | 4.6         |
| Transport and storage                 | * 1.1       | * 1.2       | * 0.9       | * 1.9       | 0.6         |
| Communication services                | 0.1         | * 0.6       | 0.2         | 0.2         | * 0.2       |
| Finance and insurance                 | * 1.7       | 2.5         | 4.6         | 2.9         | 3.9         |
| Property and business services        | * 4.1       | 7.9         | * 5.7       | 7.4         | 10.2        |
| Government administration and defence | 1.7         | 2.8         | 3.4         | 2.5         | 3.3         |
| Education                             | 1.6         | 2.5         | 2.8         | 2.6         | 2.6         |
| Health and community services         | 3.0         | 7.4         | 6.0         | 5.2         | 6.7         |
| Cultural and recreational services    | * 0.6       | * 1.3       | * 1.1       | 1.1         | 1.5         |
| Personal and other services           | * 1.6       | * 1.4       | * 3.1       | * 2.0       | * 1.0       |
| <b>All industries</b>                 | <b>30.2</b> | <b>49.4</b> | <b>53.7</b> | <b>53.6</b> | <b>58.1</b> |

Source: *Job Vacancies and Overtime, Australia* (6354.0).

looking for work or available to start work. Discouraged job seekers are among those persons marginally attached to the labour force. They are persons who want to work and are available to start work, but are not actively looking for work as they believe they cannot find a job.

Of the 3.6 million persons aged 15–69 years not in the labour force at September 1996, the majority (67%) were female. The proportion of persons not in the labour force generally rises with age (see graph 6.27). The exceptions are: the 15–19 age group given its high levels of educational participation; and females during the main child bearing years of 25–34 years.

Some 24% of persons not in the labour force reported marginal attachment to the labour force (table 6.28). An estimated 70% of these potential labour force participants were female.

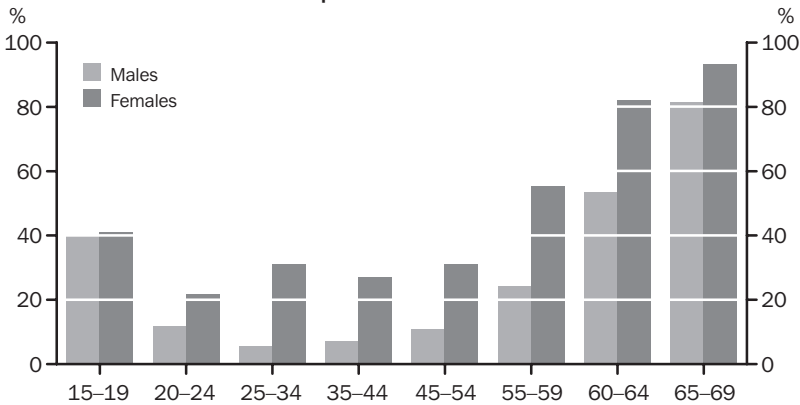
Of those marginally attached, 93% were not actively looking for work but were available to

start work within four weeks, and 7% were actively looking for work but unavailable to start work in the reference week. Of those not actively looking for work the reasons most commonly reported by males were ‘attending an educational institution’ (35%) and ‘own ill health/physical disability’ (19%). In contrast, for females the most commonly reported reasons were ‘childcare’ (31%), ‘attending an educational institution’ (12%) and ‘other family considerations’ (11%).

In September 1996 there were 118,900 discouraged jobseekers, an increase of 6.3% from September 1995. The majority of female discouraged jobseekers were aged 25–54 years (60%). In contrast the majority of male discouraged jobseekers were aged 55–69 years (70%).

Of male discouraged jobseekers, 53% intended to enter the labour force in the next 12 months. For females, the corresponding proportion was 63%.

6.27 PROPORTION OF PERSONS NOT IN THE LABOUR FORCE, By Age — September 1996



Source: Labour Force, Australia (6203.0).

**6.28 CIVILIAN POPULATION AGED 15–69, Labour Force Status — September**

|                                                                                                | September       |                 |                 |                 |                 |                 |
|------------------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                                                                                | 1991            | 1992            | 1993            | 1994            | 1995            | 1996            |
|                                                                                                | '000            | '000            | '000            | '000            | '000            | '000            |
| Persons in the labour force                                                                    | 8 591.5         | 8 647.5         | 8 744.6         | 8 875.5         | 9 057.0         | 9 183.1         |
| Persons not in the labour force with marginal attachment to the labour force                   |                 |                 |                 |                 |                 |                 |
| Wanted to work and were actively looking for work                                              |                 |                 |                 |                 |                 |                 |
| Were available to start work within four weeks                                                 | 24.1            | 33.8            | 34.8            | 38.4            | 32.8            | 34.7            |
| Were not available to start work within four weeks                                             | 22.5            | 25.3            | 23.5            | 22.9            | 31.0            | 23.3            |
| Total                                                                                          | 46.7            | 59.1            | 58.3            | 61.4            | 63.8            | 58.0            |
| Wanted to work but not actively looking for work and available to start work within four weeks |                 |                 |                 |                 |                 |                 |
| Discouraged jobseekers                                                                         | 138.2           | 145.6           | 147.4           | 106.5           | 111.9           | 118.9           |
| Other                                                                                          | 634.5           | 641.7           | 702.0           | 605.5           | 687.1           | 702.6           |
| Total                                                                                          | 772.7           | 787.3           | 849.5           | 712.0           | 799.0           | 821.5           |
| Total with marginal attachment to the labour force                                             | 819.3           | 846.4           | 907.8           | 773.3           | 862.8           | 879.6           |
| Without marginal attachment to the labour force                                                | 2 824.6         | 2 891.7         | 2 848.7         | 2 895.5         | 2 778.1         | 2 819.8         |
| Total persons not in the labour force                                                          | 3 643.9         | 3 738.1         | 3 756.4         | 3 668.8         | 3 640.9         | 3 699.4         |
| <b>Civilian population aged 15–69</b>                                                          | <b>12 235.4</b> | <b>12 385.7</b> | <b>12 501.0</b> | <b>12 544.3</b> | <b>12 697.9</b> | <b>12 882.5</b> |

Source: *Persons Not in the Labour Force, Australia* (6220.0).

## Wage rates, earnings, costs of labour and hours of work

### Award rates of pay indexes

The award rates of pay indexes are based on a representative sample of award classifications, designed to measure trends in rates payable under awards, determinations and collective agreements. The indexes are based on the industry and occupation structures existing in May 1985. Estimates of award rates of pay for each component of the series are expressed as index numbers based on June 1985 = 100.0. Wage variations from enterprise bargaining awards and agreements are generally excluded from award rates of pay indexes.

The monthly award rates of pay indexes ceased with the release of the indexes for June 1997. Recent changes in the Australian labour market, especially the increasing decentralisation of

wage fixing arrangements, have been making these indexes increasingly inappropriate and unreliable as measures of change in wage rates. For example, the indexes reflect only those changes in base pay that apply to all employees covered by a particular award. This means that most enterprise bargaining agreements were outside the scope of the index, and hence wage movements in these agreements were not captured by it.

A new wage cost index is currently being developed. This index will measure movements in underlying wage rates resulting from enterprise, workplace and individual employee agreements, as well as changes to award rates.

Table 6.29 shows the award rates of pay indexes for full-time adult males and females by industry for June 1995, 1996 and 1997. In the 12 months to June 1997, the index rose by 1.2% for full-time adult males and 1.9% for full-time adult females.

**6.29 WEEKLY AWARD RATES OF PAY INDEXES(a), Full-time Adult Employees — By Industry**

| Industry                                                 | Males        |              |              | Females      |              |              |
|----------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                                                          | June 1995    | June 1996    | June 1997    | June 1995    | June 1996    | June 1997    |
| Mining                                                   | 144.3        | 146.1        | 147.2        | ..           | ..           | —            |
| Manufacturing                                            |              |              |              |              |              |              |
| Food, beverages, tobacco                                 | 143.8        | 146.0        | 147.3        | 143.8        | 146.3        | 152.3        |
| Textiles, clothing, and footwear                         | 158.9        | 161.9        | 162.9        | 160.5        | 163.8        | 165.1        |
| Metal products, machinery and equipment                  |              |              |              |              |              |              |
| Basic metal products                                     | 140.5        | 141.4        | 142.2        | ..           | ..           | —            |
| Fabricated metal products; other machinery and equipment | 148.6        | 151.3        | 154.3        | ..           | ..           | —            |
| All metal products, machinery and equipment              | 145.1        | 147.1        | 149.5        | 148.7        | 151.2        | 155.7        |
| Transport equipment                                      | 143.9        | 145.7        | 148.4        | ..           | ..           | —            |
| Other manufacturing(b)                                   | 150.0        | 152.6        | 155.0        | 151.8        | 154.7        | 158.9        |
| Total manufacturing                                      | 145.9        | 148.2        | 150.0        | 151.0        | 153.7        | 157.4        |
| Construction                                             | 142.2        | 144.8        | 146.4        | ..           | ..           | —            |
| Wholesale and retail trade                               |              |              |              |              |              |              |
| Wholesale trade                                          | 148.0        | 150.1        | 152.6        | 147.3        | 149.9        | 154.8        |
| Retail trade                                             | 154.4        | 157.1        | 159.0        | 151.4        | 154.0        | 155.6        |
| Total wholesale and retail trade                         | 151.3        | 153.8        | 156.0        | 150.0        | 152.6        | 155.3        |
| Finance, property and business services                  | 142.0        | 143.1        | 145.0        | 142.8        | 144.1        | 147.0        |
| Community services                                       | 142.4        | 144.9        | 146.4        | 147.0        | 150.7        | 153.2        |
| <b>All industries(c)</b>                                 | <b>143.6</b> | <b>145.8</b> | <b>147.5</b> | <b>147.1</b> | <b>150.1</b> | <b>153.0</b> |

(a) Reference base year June 1985 = 100.0. (b) Includes Wood, wood products and furniture; Non-metallic mineral products; and Miscellaneous manufacturing. (c) Excludes employees in the Defence forces; Agriculture; Services to agriculture; and employees in private households employing staff.

Source: Award Rates of Pay Indexes, Australia (6312.0).

**Average weekly earnings**

Weekly total earnings include award, over-award and overtime pay while weekly ordinary time earnings relate only to that part of total earnings attributable to award, standard or agreed hours of work.

Table 6.30 shows the average weekly ordinary time earnings (AWOTE) of both male and female

wage and salary earners over the five years from May 1992 to May 1997. For males the AWOTE increased by 18.5% (an average annual increase of 3.5%) from \$624.80 to \$740.70 over this period, and for females by 19.4% (an average annual increase of 3.6%) from \$519.70 to \$620.30.

**6.30 AVERAGE WEEKLY EARNINGS, Australia**

|                                       | Reference period |          |          |          |          |          |
|---------------------------------------|------------------|----------|----------|----------|----------|----------|
|                                       | May 1992         | May 1993 | May 1994 | May 1995 | May 1996 | May 1997 |
|                                       | \$               | \$       | \$       | \$       | \$       | \$       |
| <b>MALES</b>                          |                  |          |          |          |          |          |
| Full-time adult employees             |                  |          |          |          |          |          |
| Average weekly ordinary time earnings | 624.80           | 632.90   | 654.00   | 687.80   | 715.80   | 740.70   |
| Average weekly total earnings         | 665.50           | 679.60   | 705.90   | 743.00   | 774.20   | 795.80   |
| All male employees                    |                  |          |          |          |          |          |
| Average weekly total earnings         | 597.40           | 612.50   | 625.10   | 652.70   | 671.50   | 686.30   |
| <b>FEMALES</b>                        |                  |          |          |          |          |          |
| Full-time adult employees             |                  |          |          |          |          |          |
| Average weekly ordinary time earnings | 519.70           | 533.00   | 552.10   | 575.50   | 594.10   | 620.30   |
| Average weekly total earnings         | 531.20           | 545.60   | 566.70   | 589.80   | 607.90   | 634.80   |
| All female employees                  |                  |          |          |          |          |          |
| Average weekly total earnings         | 397.00           | 406.30   | 422.80   | 429.90   | 441.10   | 457.40   |
| <b>PERSONS</b>                        |                  |          |          |          |          |          |
| Full-time adult employees             |                  |          |          |          |          |          |
| Average weekly ordinary time earnings | 587.30           | 597.80   | 617.50   | 647.30   | 672.60   | 696.60   |
| Average weekly total earnings         | 617.60           | 632.60   | 656.10   | 687.80   | 715.20   | 736.80   |
| All employees                         |                  |          |          |          |          |          |
| Average weekly total earnings         | 504.50           | 517.50   | 531.80   | 548.10   | 564.40   | 577.50   |

Source: *Average Weekly Earnings, States and Australia* (6302.0).

## Composition and distribution of earnings

Statistics on the composition and distribution of average weekly earnings and hours, for various categories of employees by occupation groups, industries and sectors, provide an additional perspective on earnings.

Table 6.31 shows the distribution of average weekly earnings across different occupations and categories of employees in May 1996. Average weekly total earnings vary considerably across occupations and between males and females, with earnings generally reflecting associated skill levels. In May 1996, full-time adult male Managers and administrators received estimated average weekly total earnings of \$1,162.30, while their female counterparts averaged \$987.80. At the lower levels of total earnings ranges, full-time adult male Labourers and related workers earned on average \$582.40, compared to \$489.20 for females in the same occupation.

Part-time employees in Elementary clerical, sales and service worker occupations received estimated average total earnings of \$184.10 per week in May 1996, well below the average

earnings for part-time employees in all occupations (\$253.10).

For table 6.32, the distribution of weekly total earnings of the major occupation groups was arranged into percentiles (100 population groups having equal frequencies). The table shows the weekly total earnings of a selection of progressively higher percentiles, for the major occupation groups. The widest disparity in weekly total earnings between the 10th and 90th percentiles is in male Managers and administrators. The narrowest disparity is in female Elementary clerical, sales and service workers. The table shows that the disparity between male and female weekly total earnings is generally greater for the higher percentiles than for the lower percentiles.

Table 6.33 presents the composition of average weekly earnings, between ordinary and overtime earnings, for full-time adult employees by industry. Significant amounts of weekly overtime earnings were recorded for full-time adult employees in the Mining (\$111.20), Transport and storage (\$80.60), Manufacturing (\$80.20) and Construction (\$77.90) industries.

**6.31 AVERAGE WEEKLY TOTAL EARNINGS, Occupation(a) by Category of Employee — May 1996**

| Occupation                                       | Full-time employees |                |        |        |          |          |                     |               |
|--------------------------------------------------|---------------------|----------------|--------|--------|----------|----------|---------------------|---------------|
|                                                  | Managerial          | Non-managerial |        |        | Total    |          | Part-time employees | All employees |
|                                                  | Adult               | Adult          | Junior | Total  | Adult    | Total    |                     |               |
|                                                  | \$                  | \$             | \$     | \$     | \$       | \$       | \$                  | \$            |
| MALES                                            |                     |                |        |        |          |          |                     |               |
| Managers and administrators                      | 1 170.20            | 958.50         | ..     | 958.50 | 1 162.30 | 1 162.30 | 469.40              | 1 150.20      |
| Professionals                                    | 1 047.20            | 908.80         | 417.20 | 906.70 | 933.30   | 931.50   | 389.40              | 860.00        |
| Associate professionals                          | 764.30              | 809.90         | 315.80 | 806.60 | 792.20   | 790.30   | 221.80              | 759.50        |
| Tradespersons and related workers                | 503.40              | 711.80         | 323.00 | 657.10 | 699.30   | 649.10   | 283.00              | 631.30        |
| Advanced clerical and service workers            | 581.80              | 720.10         | 407.20 | 716.20 | 710.80   | 707.40   | 245.60              | 656.30        |
| Intermediate clerical, sales and service workers | 697.30              | 647.90         | 348.30 | 640.90 | 649.80   | 642.90   | 221.90              | 564.50        |
| Intermediate production and transport workers    | 485.70              | 721.10         | 349.30 | 712.50 | 716.10   | 707.70   | 230.00              | 635.60        |
| Elementary clerical, sales and service workers   | 521.30              | 613.90         | 315.70 | 594.30 | 613.10   | 593.70   | 167.50              | 385.80        |
| Labourers and related workers                    | 505.50              | 583.10         | 264.60 | 569.60 | 582.40   | 569.10   | 195.90              | 464.40        |
| All occupations                                  | 979.90              | 729.70         | 322.40 | 708.70 | 780.60   | 761.50   | 234.30              | 684.30        |
| FEMALES                                          |                     |                |        |        |          |          |                     |               |
| Managers and administrators                      | 995.60              | 842.00         | ..     | 842.00 | 987.80   | 987.80   | 428.90              | 924.00        |
| Professionals                                    | 791.00              | 774.00         | 289.40 | 773.80 | 774.90   | 774.80   | 396.70              | 624.90        |
| Associate professionals                          | 592.80              | 636.00         | 348.30 | 627.20 | 618.80   | 613.70   | 333.30              | 544.10        |
| Tradespersons and related workers                | 432.60              | 519.90         | 309.80 | 456.10 | 510.80   | 454.40   | 255.60              | 367.50        |
| Advanced clerical and service workers            | 491.10              | 591.80         | 328.90 | 583.90 | 581.50   | 574.70   | 264.50              | 475.70        |
| Intermediate clerical, sales and service workers | 465.70              | 543.00         | 317.60 | 527.70 | 541.10   | 526.30   | 247.60              | 401.00        |
| Intermediate production and transport workers    | 361.30              | 516.60         | 375.00 | 512.30 | 515.80   | 511.50   | 212.50              | 371.50        |
| Elementary clerical,sales and service workers    | 378.40              | 504.60         | 311.90 | 471.00 | 503.40   | 470.30   | 190.40              | 276.50        |
| Labourers and related workers                    | n.p.                | 489.20         | 271.90 | 481.70 | 489.20   | 481.70   | 204.70              | 307.90        |
| All occupations                                  | 729.20              | 605.70         | 315.80 | 588.60 | 620.90   | 604.90   | 260.00              | 447.20        |
| PERSONS                                          |                     |                |        |        |          |          |                     |               |
| Managers and administrators                      | 1 137.80            | 930.60         | ..     | 930.60 | 1 129.60 | 1 129.60 | 444.00              | 1 104.10      |
| Professionals                                    | 994.30              | 843.80         | 407.00 | 842.80 | 862.40   | 861.50   | 395.10              | 733.60        |
| Associate professionals                          | 708.90              | 755.10         | 338.20 | 749.10 | 737.00   | 733.50   | 303.50              | 679.00        |
| Tradespersons and related workers                | 496.50              | 701.00         | 321.20 | 643.30 | 688.20   | 635.50   | 268.30              | 601.50        |
| Advanced clerical and service workers            | 503.70              | 618.10         | 336.20 | 610.60 | 607.20   | 600.70   | 263.40              | 504.10        |
| Intermediate clerical, sales and service workers | 582.20              | 584.20         | 323.00 | 570.90 | 584.10   | 571.20   | 243.80              | 449.60        |
| Intermediate production and transport workers    | 482.30              | 699.60         | 352.80 | 691.30 | 695.40   | 687.30   | 223.60              | 594.30        |
| Elementary clerical,sales and service workers    | 443.20              | 559.10         | 312.90 | 528.70 | 558.00   | 528.00   | 184.10              | 314.30        |
| Labourers and related workers                    | 505.50              | 557.10         | 266.30 | 545.40 | 556.80   | 545.20   | 201.40              | 398.50        |
| All occupations                                  | 917.50              | 683.00         | 319.70 | 663.10 | 723.90   | 705.60   | 253.10              | 573.70        |

(a) Occupation classified according to the Australian Standard Classification of Occupations (Second Edition).

Source: *Employee Earnings and Hours, Australia* (6306.0).

**6.32 WEEKLY TOTAL EARNINGS(a), Selected Percentiles by Occupation(b) — May 1996**

| Occupation                                       | 10th<br>percentile<br>\$ | 25th<br>percentile<br>\$ | 50th<br>percentile(c)<br>\$ | 75th<br>percentile<br>\$ | 90th<br>percentile<br>\$ | Average<br>(mean)<br>earnings<br>\$ |
|--------------------------------------------------|--------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|-------------------------------------|
| <b>MALES</b>                                     |                          |                          |                             |                          |                          |                                     |
| Managers and administrators                      | 673.00                   | 851.00                   | 1 040.00                    | 1 299.20                 | 1 776.20                 | 1 162.30                            |
| Professionals                                    | 570.70                   | 713.80                   | 843.80                      | 1 034.20                 | 1 354.90                 | 933.30                              |
| Associate professionals                          | 461.60                   | 603.00                   | 756.00                      | 926.30                   | 1 153.80                 | 792.20                              |
| Tradespersons and related workers                | 432.30                   | 517.20                   | 629.90                      | 816.60                   | 1 056.10                 | 699.30                              |
| Advanced clerical and service workers            | 445.70                   | 573.40                   | 690.90                      | 806.30                   | 987.10                   | 710.80                              |
| Intermediate clerical, sales and service workers | 457.20                   | 518.50                   | 619.40                      | 740.70                   | 885.20                   | 649.80                              |
| Intermediate production and transport workers    | 438.20                   | 502.00                   | 634.80                      | 844.50                   | 1 111.40                 | 716.10                              |
| Elementary clerical, sales and service workers   | 420.50                   | 473.50                   | 581.10                      | 695.10                   | 868.60                   | 613.10                              |
| Labourers and related workers                    | 385.60                   | 445.80                   | 524.80                      | 668.90                   | 860.90                   | 582.40                              |
| <i>All occupations</i>                           | <i>447.80</i>            | <i>538.70</i>            | <i>701.30</i>               | <i>915.40</i>            | <i>1 194.30</i>          | <i>780.60</i>                       |
| <b>FEMALES</b>                                   |                          |                          |                             |                          |                          |                                     |
| Managers and administrators                      | 605.90                   | 761.60                   | 962.40                      | 1 146.60                 | 1 408.50                 | 987.80                              |
| Professionals                                    | 544.30                   | 647.80                   | 770.20                      | 853.00                   | 977.10                   | 774.90                              |
| Associate professionals                          | 399.10                   | 500.50                   | 596.70                      | 728.10                   | 867.40                   | 618.80                              |
| Tradespersons and related workers                | 368.20                   | 426.10                   | 470.30                      | 580.30                   | 725.90                   | 510.80                              |
| Advanced clerical and service workers            | 415.60                   | 489.30                   | 573.50                      | 671.40                   | 757.20                   | 581.50                              |
| Intermediate clerical, sales and service workers | 407.40                   | 458.90                   | 521.90                      | 607.00                   | 703.60                   | 541.10                              |
| Intermediate production and transport workers    | 380.10                   | 408.90                   | 462.50                      | 569.70                   | 712.70                   | 515.80                              |
| Elementary clerical, sales and service workers   | 386.30                   | 421.80                   | 468.60                      | 553.60                   | 678.40                   | 503.40                              |
| Labourers and related workers                    | 359.40                   | 403.00                   | 464.90                      | 553.40                   | 666.30                   | 489.20                              |
| <i>All occupations</i>                           | <i>408.20</i>            | <i>471.90</i>            | <i>576.80</i>               | <i>734.50</i>            | <i>880.70</i>            | <i>620.90</i>                       |
| <b>PERSONS</b>                                   |                          |                          |                             |                          |                          |                                     |
| Managers and administrators                      | 650.50                   | 828.70                   | 1 028.20                    | 1 267.10                 | 1 723.10                 | 1 129.60                            |
| Professionals                                    | 555.20                   | 677.80                   | 813.60                      | 944.50                   | 1 193.50                 | 862.40                              |
| Associate professionals                          | 422.10                   | 545.30                   | 700.60                      | 867.70                   | 1 075.00                 | 737.00                              |
| Tradespersons and related workers                | 426.70                   | 506.40                   | 620.10                      | 802.60                   | 1 038.40                 | 688.20                              |
| Advanced clerical and service workers            | 424.50                   | 498.00                   | 588.30                      | 695.50                   | 808.70                   | 607.20                              |
| Intermediate clerical, sales and service workers | 423.70                   | 479.10                   | 552.80                      | 658.80                   | 787.30                   | 584.10                              |
| Intermediate production and transport workers    | 420.50                   | 488.00                   | 606.80                      | 822.00                   | 1 090.80                 | 695.40                              |
| Elementary clerical, sales and service workers   | 400.90                   | 440.40                   | 509.10                      | 631.60                   | 769.30                   | 558.00                              |
| Labourers and related workers                    | 375.90                   | 428.80                   | 506.70                      | 635.40                   | 822.70                   | 556.80                              |
| <b>All occupations</b>                           | <b>427.10</b>            | <b>507.00</b>            | <b>649.60</b>               | <b>844.20</b>            | <b>1 090.20</b>          | <b>723.90</b>                       |

(a) For full-time adult employees. (b) Occupation classified according to the Australian Standard Classification of Occupations (Second Edition). (c) The median percentile.

Source: *Employee Earnings and Hours, Australia* (6306.0).

**6.33 AVERAGE WEEKLY EARNINGS(a), Composition — May 1996**

|                                       | Ordinary earnings | Overtime earnings | Total earnings |
|---------------------------------------|-------------------|-------------------|----------------|
| Industry                              | \$                | \$                | \$             |
| Mining                                | 1 060.50          | 111.20            | 1 171.70       |
| Manufacturing                         | 630.40            | 80.20             | 710.60         |
| Electricity, gas and water supply     | 738.90            | 71.80             | 810.80         |
| Construction                          | 649.80            | 77.90             | 727.70         |
| Wholesale trade                       | 643.30            | 25.20             | 668.60         |
| Retail trade                          | 551.90            | 19.60             | 571.50         |
| Accommodation, cafes and restaurants  | 555.60            | 11.60             | 567.30         |
| Transport and storage                 | 690.40            | 80.60             | 771.00         |
| Communication services                | 708.90            | 73.60             | 782.40         |
| Finance and insurance                 | 789.60            | 15.00             | 804.50         |
| Property and business services        | 723.80            | 22.10             | 745.80         |
| Government administration and defence | 717.80            | 20.40             | 738.30         |
| Education                             | 770.30            | * 4.40            | 774.70         |
| Health and community services         | 700.80            | 22.00             | 722.80         |
| Cultural and recreational services    | 663.70            | 18.30             | 682.10         |
| Personal and other services           | 659.00            | 37.10             | 696.10         |
| All industries                        | 683.20            | 40.80             | 723.90         |

(a) For full-time adult employees

Source: *Employee Earnings and Hours, Australia* (6306.0).**Standard non-wage benefits**

In addition to wages and salaries, the majority of employees also receive leave (sick, holiday and long-service) and superannuation benefits. By their nature, it is difficult to collect data on the value of most non-wage benefits. The statistics presented in this section therefore relate to the incidence of standard non-wage benefits, and not to their value.

In August 1996, 97% of the 5,162,600 full-time employees received one or more of the 'standard' employment benefits of superannuation, sick leave, holiday leave or long-service leave in their main job. In comparison, 69% of the 1,899,600 part-time employees received one or more 'standard' employment benefits.

Table 6.34 shows the proportion of employees receiving one or more of the 'standard' employment benefits. The proportion receiving

a superannuation benefit (i.e. belonging to a superannuation scheme or fund arranged by their employer) has increased steadily in recent years. The proportion rose from 73% in 1990 to 94% in 1996 for full-time employees and from 31% in 1990 to 66% in 1996 for part-time employees. For full-time employees, the proportion receiving holiday and sick leave has fallen between 1990 and 1996, while for part-time employees the proportion receiving these benefits has risen slightly.

Public sector employees had a higher incidence of receipt of standard benefits than private sector employees. Of the 1,594,800 public sector employees, 94% received superannuation, 87% received holiday leave, 88% received sick leave and 84% received long-service leave. In comparison, the proportions of the 5,467,300 private sector employees receiving standard benefits were: superannuation (84%), holiday leave (68%), sick leave (68%), and long-service leave (58%) (based on table 6.35).



**6.34 EMPLOYEES IN MAIN JOB(a), Type of Standard Benefit Received**

| Type of benefit    | Working full-time |             | Working part-time |             | Total employees |             |
|--------------------|-------------------|-------------|-------------------|-------------|-----------------|-------------|
|                    | August 1990       | August 1996 | August 1990       | August 1996 | August 1990     | August 1996 |
|                    | %                 | %           | %                 | %           | %               | %           |
| Superannuation     | 72.7              | 93.9        | 30.7              | 65.8        | 51.6            | 86.4        |
| Holiday leave      | 93.0              | 88.1        | 29.7              | 30.9        | 79.4            | 72.7        |
| Sick leave         | 92.3              | 87.9        | 30.1              | 30.9        | 78.9            | 72.6        |
| Long-service leave | 78.1              | 78.5        | 23.0              | 25.5        | 66.2            | 64.3        |

(a) Excluding those attending school.

Source: Trade Union Members, Australia (6325.0).

**6.35 EMPLOYEES, Selected Characteristics and Standard Benefits — August 1996**

|                                   | Type of standard benefit received |                |                |                |                    |                | Received a benefit |
|-----------------------------------|-----------------------------------|----------------|----------------|----------------|--------------------|----------------|--------------------|
|                                   | No standard benefits received     | Superannuation | Holiday leave  | Sick leave     | Long-service leave | Total          |                    |
|                                   | '000                              | '000           | '000           | '000           | '000               | '000           | %                  |
| Full-time and part-time employees |                                   |                |                |                |                    |                |                    |
| Full-time                         | 168.7                             | 4 849.9        | 4 550.1        | 4 536.0        | 4 055.0            | 5 162.6        | 96.7               |
| Part-time                         | 593.3                             | 1 249.1        | 587.0          | 587.8          | 484.4              | 1 899.6        | 68.8               |
| Permanent or casual employees     |                                   |                |                |                |                    |                |                    |
| Permanent                         | ..                                | 5 025.1        | 5 137.1        | 5 123.8        | 4 471.9            | 5 220.9        | 100.0              |
| Casual                            | 762.0                             | 1 073.9        | ..             | ..             | 67.4               | 1 841.2        | 58.6               |
| Sector                            |                                   |                |                |                |                    |                |                    |
| Public                            | 64.8                              | 1 496.4        | 1 394.4        | 1 406.2        | 1 345.2            | 1 594.8        | 95.9               |
| Private                           | 697.2                             | 4 602.6        | 3 742.7        | 3 717.6        | 3 194.1            | 5 467.3        | 87.2               |
| <b>Total</b>                      | <b>762.0</b>                      | <b>6 099.0</b> | <b>5 137.1</b> | <b>5 123.8</b> | <b>4 539.3</b>     | <b>7 062.1</b> | <b>89.2</b>        |

Source: Trade Union Members, Australia (6325.0).

**Superannuation**

The number of employees who received superannuation as an employment benefit in their main job more than doubled between August 1986 (41%) and August 1996 (86%), with the largest rises recorded between August 1990 (52%) to August 1992 (79%) (table 6.36). The large increase between August 1990 and August 1992 can be attributed to legislative changes that affected both the public and private sector.

In August 1986, 28% of female employees received superannuation compared to 51% of male employees. Over time, the rate of increase has been much stronger for female employees, and in August 1996 the number of female employees who received superannuation was 84%.

**6.36 EMPLOYEES WHO RECEIVED SUPERANNUATION BENEFITS, August**

|      | Males | Females | Persons |
|------|-------|---------|---------|
|      | %     | %       | %       |
| 1986 | 49.2  | 25.2    | 39.4    |
| 1988 | 50.9  | 28.3    | 41.4    |
| 1990 | 57.5  | 43.8    | 51.6    |
| 1992 | 83.5  | 76.2    | 80.3    |
| 1994 | 88.6  | 85.2    | 87.1    |
| 1996 | 88.0  | 84.3    | 86.4    |

Source: Trade Union Members, Australia (6325.0).

In August 1996 the majority of employees aged 20 years and over received superannuation as an employment benefit. In contrast, just over half (51%) of employees aged 15–19 years were covered by superannuation. The proportions of employees covered by superannuation benefits, by age group, were: 86% of employees aged 20–24; 90% of 25–34 year olds; 91% of 35–44 year olds; 92% of 45–54 year olds and 89% of 55–59 year olds. Of employees aged 60 and over, 73% had superannuation coverage.

In August 1996, 94% of employees in the public sector received superannuation benefits (95% of males and 92% of females), rising from 62% in August 1986. In comparison, for the private sector, 84% of employees received superannuation benefits in August 1996. Over time, the rate of increase has been greater for persons employed in the private sector, rising from 30% in 1986.

The number of permanent employees who received superannuation as an employment benefit rose from 47% in August 1986 to 96% in August 1996. For casual employees, the proportion who received superannuation benefits rose from 4% in August 1986, to 15% in August 1990, and to 37% in August 1992. The

rate of increase has since slowed, and in August 1996 the number of casual employees in receipt of superannuation was 58%.

The Electricity, gas and water supply and Mining industries recorded the highest proportion of employees who received superannuation benefits in their main job in August 1996 (99% and 96% respectively). Finance and insurance (96%) and Communication services (95%) also recorded high proportions of coverage. In contrast, Agriculture, forestry and fishing (73%) and Retail trade (74%) recorded the lowest proportions of employees who received superannuation benefits (table 6.37).

### **Hours of work and work patterns**

Statistics on hours and patterns of work are essential for the study of economic activity, productivity, working conditions, living standards and the quality of life of working people. In this section, a range of data has been brought together on work patterns and hours of work.

The average weekly hours worked in 1996–97 by various categories of employed persons, and in different industries, are shown in tables 6.38 and 6.39.

**6.37 PROPORTION OF EMPLOYEES WHO RECEIVED SUPERANNUATION BENEFITS, August 1996**

|                                       | Full-time   | Part-time   | Total       |
|---------------------------------------|-------------|-------------|-------------|
| Industry                              | %           | %           | %           |
| <b>MALES</b>                          |             |             |             |
| Agriculture, forestry and fishing     | 81.7        | 49.6        | 75.3        |
| Mining                                | 95.9        | 82.4        | 95.5        |
| Manufacturing                         | 95.7        | 61.7        | 93.8        |
| Electricity, gas and water supply     | 99.1        | 66.7        | 98.6        |
| Construction                          | 85.9        | 34.1        | 81.3        |
| Wholesale trade                       | 96.8        | 54.8        | 93.9        |
| Retail trade                          | 92.0        | 45.6        | 77.6        |
| Accommodation, cafes and restaurants  | 87.7        | 57.0        | 76.9        |
| Transport and storage                 | 93.6        | 63.2        | 90.8        |
| Communication services                | 97.2        | 40.9        | 95.9        |
| Finance and insurance                 | 95.7        | 70.3        | 95.1        |
| Property and business services        | 91.3        | 57.4        | 86.2        |
| Government administration and defence | 97.3        | 54.3        | 94.0        |
| Education                             | 96.9        | 62.2        | 91.5        |
| Health and community services         | 92.9        | 68.9        | 88.7        |
| Cultural and recreational services    | 90.9        | 43.2        | 75.7        |
| Personal and other services           | 94.7        | 37.9        | 88.6        |
| <i>All industries</i>                 | 93.4        | 52.5        | 88.0        |
| <b>FEMALES</b>                        |             |             |             |
| Agriculture, forestry and fishing     | 79.2        | 49.7        | 66.0        |
| Mining                                | 98.1        | 100.0       | 98.4        |
| Manufacturing                         | 94.3        | 69.3        | 88.4        |
| Electricity, gas and water supply     | 98.7        | 100.0       | 98.7        |
| Construction                          | 86.5        | 62.2        | 75.7        |
| Wholesale trade                       | 95.4        | 80.5        | 90.9        |
| Retail trade                          | 93.0        | 57.3        | 70.1        |
| Accommodation, cafes and restaurants  | 95.3        | 67.2        | 76.7        |
| Transport and storage                 | 95.5        | 80.4        | 91.3        |
| Communication services                | 96.9        | 84.5        | 93.8        |
| Finance and insurance                 | 98.9        | 89.2        | 96.3        |
| Property and business services        | 94.7        | 68.2        | 85.3        |
| Government administration and defence | 98.3        | 71.8        | 90.2        |
| Education                             | 96.2        | 78.3        | 89.3        |
| Health and community services         | 95.1        | 86.5        | 90.8        |
| Cultural and recreational services    | 92.7        | 59.4        | 74.5        |
| Personal and other services           | 89.7        | 51.2        | 74.5        |
| <i>All industries</i>                 | 94.9        | 70.7        | 84.3        |
| <b>PERSONS</b>                        |             |             |             |
| Agriculture, forestry and fishing     | 81.2        | 49.6        | 73.1        |
| Mining                                | 96.2        | 89.7        | 96.0        |
| Manufacturing                         | 95.4        | 66.2        | 92.4        |
| Electricity, gas and water supply     | 99.2        | 88.6        | 98.7        |
| Construction                          | 86.0        | 45.1        | 80.6        |
| Wholesale trade                       | 96.4        | 71.7        | 92.9        |
| Retail trade                          | 92.4        | 53.8        | 73.6        |
| Accommodation, cafes and restaurants  | 90.8        | 64.3        | 76.7        |
| Transport and storage                 | 94.0        | 71.2        | 90.9        |
| Communication services                | 97.2        | 78.1        | 95.3        |
| Finance and insurance                 | 97.3        | 88.0        | 95.8        |
| Property and business services        | 92.7        | 64.7        | 85.8        |
| Government administration and defence | 97.7        | 67.2        | 92.4        |
| Education                             | 96.5        | 75.5        | 90.0        |
| Health and community services         | 94.4        | 84.9        | 90.3        |
| Cultural and recreational services    | 91.7        | 53.6        | 75.1        |
| Personal and other services           | 92.7        | 48.2        | 81.8        |
| <b>All industries</b>                 | <b>93.9</b> | <b>65.8</b> | <b>86.4</b> |

Source: Trade Union Members, Australia (6325.0).

### 6.38 EMPLOYED PERSONS, Aggregate and Average Weekly Hours Worked(a), Annual Average(b) — 1996–97

|                                                                     |             |       |         | Females     |       |         |
|---------------------------------------------------------------------|-------------|-------|---------|-------------|-------|---------|
|                                                                     | Unit        | Males | Married | Not married | Total | Persons |
| Aggregate weekly hours worked by                                    |             |       |         |             |       |         |
| All workers                                                         | mill. hours | 192.5 | 63.9    | 42.6        | 106.5 | 299.0   |
| Full-time workers                                                   | mill. hours | 184.0 | 46.8    | 34.6        | 81.4  | 265.4   |
| Part-time workers                                                   | mill. hours | 8.5   | 17.1    | 8.0         | 25.1  | 33.6    |
| Average weekly hours worked by                                      |             |       |         |             |       |         |
| All workers                                                         | hours       | 40.6  | 29.3    | 29.7        | 29.4  | 35.8    |
| Full-time workers                                                   | hours       | 43.9  | 39.8    | 38.9        | 39.4  | 42.4    |
| Part-time workers                                                   | hours       | 15.4  | 17.0    | 14.7        | 16.2  | 16.0    |
| Employees                                                           | hours       | 39.6  | 29.3    | 29.6        | 29.4  | 35.0    |
| Other than employees                                                | hours       | 45.3  | 29.3    | 30.7        | 29.6  | 39.9    |
| All workers who worked one hour or more in the reference week       | hours       | 42.4  | 30.8    | 31.1        | 30.9  | 37.5    |
| Full-time workers who worked one hour or more in the reference week | hours       | 45.9  | 41.9    | 40.7        | 41.4  | 44.4    |
| Part-time workers who worked one hour or more in the reference week | hours       | 16.1  | 17.9    | 15.4        | 17.0  | 16.8    |

(a) The estimates refer to actual hours worked, not hours paid for. (b) Averages calculated on quarterly estimates.

Source: Labour Force, Australia (6203.0).

### 6.39 EMPLOYED PERSONS, Average Weekly Hours Worked(a) by Industry, Annual Average(b) — 1996–97

| Industry                              | Males       | Females     |             | Persons     |
|---------------------------------------|-------------|-------------|-------------|-------------|
|                                       |             | Married     | Total       |             |
|                                       | hours       | hours       | hours       | hours       |
| Agriculture, forestry and fishing     | 48.9        | 30.1        | 30.3        | 43.2        |
| Mining                                | 43.9        | 34.3        | 35.5        | 42.8        |
| Manufacturing                         | 40.7        | 32.1        | 32.9        | 38.6        |
| Electricity, gas and water supply     | 37.2        | 31.8        | 34.2        | 36.8        |
| Construction                          | 41.1        | 19.3        | 21.6        | 38.4        |
| Wholesale trade                       | 41.7        | 30.6        | 32.1        | 38.7        |
| Retail trade                          | 37.7        | 29.1        | 25.3        | 31.4        |
| Accommodation, cafes and restaurants  | 38.3        | 30.5        | 28.1        | 32.5        |
| Transport and storage                 | 42.1        | 29.6        | 32.0        | 39.8        |
| Communication services                | 39.2        | 30.0        | 31.3        | 36.7        |
| Finance and insurance                 | 41.8        | 30.6        | 32.0        | 36.3        |
| Property and business services        | 41.9        | 28.3        | 30.9        | 37.0        |
| Government administration and defence | 36.8        | 30.6        | 31.8        | 34.7        |
| Education                             | 38.8        | 31.3        | 32.0        | 34.4        |
| Health and community services         | 38.6        | 27.4        | 28.4        | 30.7        |
| Cultural and recreational services    | 36.6        | 27.8        | 27.9        | 32.3        |
| Personal and other services           | 37.7        | 28.8        | 29.4        | 33.7        |
| <b>All industries</b>                 | <b>40.6</b> | <b>29.3</b> | <b>29.4</b> | <b>35.8</b> |

(a) The estimates refer to actual hours worked, not hours paid for. (b) Averages calculated on quarterly estimates.

Source: Labour Force, Australia (6203.0).

## Working arrangements

In August 1995, two-thirds of all employees (4.2 million) had little flexibility as to when they started and finished work, as their start and finish times were fixed. Of these employees, 3.3 million had no say in setting these fixed times (table 6.40).

An estimated 2.4 million employees did not have fixed start and finish times, and 1.5 million of these had the flexibility of being able to choose their start and finish times on a day-to-day basis. More male employees had this flexibility than female employees (25% and 20%, respectively).

## 6.40 ALL EMPLOYEES, Working Arrangements — August 1995

|                                         | Permanent      |                |                | Casual       |              |                | Total          |                |                |
|-----------------------------------------|----------------|----------------|----------------|--------------|--------------|----------------|----------------|----------------|----------------|
|                                         | Males          | Females        | Persons        | Males        | Females      | Persons        | Males          | Females        | Persons        |
|                                         | '000           | '000           | '000           | '000         | '000         | '000           | '000           | '000           | '000           |
| Start and finish times not fixed        |                |                |                |              |              |                |                |                |                |
| Daily variation is available            | 757.3          | 397.6          | 1 154.9        | 175.2        | 186.6        | 361.8          | 932.5          | 584.2          | 1 516.7        |
| Daily variation is not available        | 411.1          | 194.2          | 605.4          | 138.4        | 181.2        | 319.6          | 549.5          | 375.4          | 924.9          |
| Total                                   | 1 168.4        | 591.9          | 1 760.3        | 313.6        | 367.7        | 681.3          | 1 482.0        | 959.6          | 2 441.6        |
| Start and finish times are fixed        |                |                |                |              |              |                |                |                |                |
| Times were negotiated with employer     | 349.2          | 352.0          | 701.3          | 64.5         | 139.5        | 204.0          | 413.8          | 491.5          | 905.3          |
| Times were not negotiated with employer | 1 558.9        | 1 200.4        | 2 759.3        | 239.9        | 343.9        | 583.7          | 1 798.8        | 1 544.3        | 3 343.1        |
| Total                                   | 1 908.1        | 1 552.5        | 3 460.6        | 304.4        | 483.3        | 787.7          | 2 212.6        | 2 035.8        | 4 248.3        |
| <b>Total</b>                            | <b>3 076.6</b> | <b>2 144.4</b> | <b>5 220.9</b> | <b>618.0</b> | <b>851.0</b> | <b>1 469.1</b> | <b>3 694.6</b> | <b>2 995.4</b> | <b>6 690.0</b> |

Source: Working Arrangements, Australia, August 1995 (6342.0.40.001).

Rostered days off were a feature of the working conditions for 27% of employees (1.8 million). Rostered days off were most common among permanent full-time employees (36%), with a higher proportion of males than females in this category reporting that they were entitled to a rostered day off (38% of males and 30% of females).

Of the 5.1 million full-time employees, 43% worked overtime on a regular basis, with a higher proportion of males working overtime regularly (46%) than females (36%) (table 6.41). A lower proportion of part-time employees worked overtime regularly (10% of males and 12% of females).

Those full-time employees most likely to work overtime regularly were employees in the occupations Managers and administrators (64% of males and 62% of females) and Professionals (60% of males and 66% of females).

In August 1995, some 977,400 employees had worked shift work in the previous four weeks (table 6.41). This represented 15% of employees (15% of males and 14% of females).

Of the 571,500 male shift workers, 507,900 (89%) were full-time employees. Of the 405,900 female shift workers, 203,800 (50%) were full-time employees.

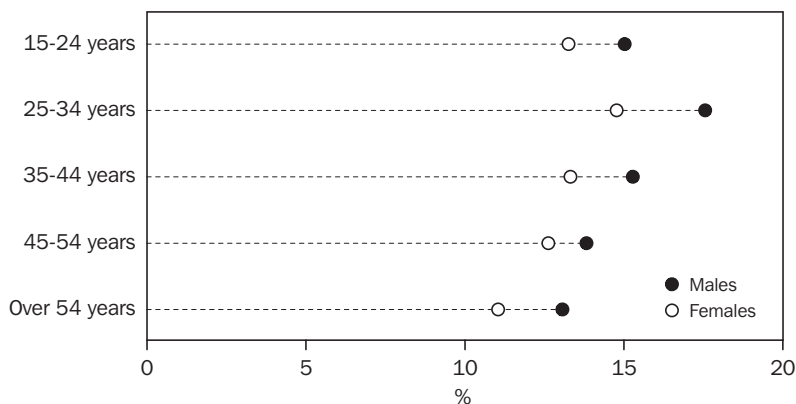
**6.41 OVERTIME AND SHIFT WORK, August 1995**

|                                        | Permanent      |                |                | Casual       |              |                | Total          |                |                |
|----------------------------------------|----------------|----------------|----------------|--------------|--------------|----------------|----------------|----------------|----------------|
|                                        | Males          | Females        | Persons        | Males        | Females      | Persons        | Males          | Females        | Persons        |
|                                        | '000           | '000           | '000           | '000         | '000         | '000           | '000           | '000           | '000           |
| <b>FULL-TIME EMPLOYEES IN MAIN JOB</b> |                |                |                |              |              |                |                |                |                |
| Overtime regularly worked              | 1 422.3        | 615.4          | 2 037.7        | 123.4        | 35.4         | 158.9          | 1 545.7        | 650.9          | 2 196.6        |
| Overtime not regularly worked          | 1 574.3        | 1 009.9        | 2 584.2        | 215.6        | 107.5        | 323.1          | 1 789.9        | 1 117.4        | 2 907.2        |
| On shift work in last 4 weeks          | 474.7          | 187.3          | 662.1          | 33.2         | 16.4         | 49.6           | 507.9          | 203.8          | 711.7          |
| No shift work in last 4 weeks          | 2 521.9        | 1 438.0        | 3 959.8        | 305.9        | 126.5        | 432.4          | 2 827.7        | 1 564.5        | 4 392.2        |
| <b>Total</b>                           | <b>2 996.6</b> | <b>1 625.3</b> | <b>4 621.9</b> | <b>339.0</b> | <b>142.9</b> | <b>482.0</b>   | <b>3 335.6</b> | <b>1 768.3</b> | <b>5 103.8</b> |
| <b>PART-TIME EMPLOYEES IN MAIN JOB</b> |                |                |                |              |              |                |                |                |                |
| Overtime regularly worked              | 13.5           | 100.6          | 114.1          | 23.1         | 52.4         | 75.5           | 36.6           | 153.0          | 189.4          |
| Overtime not regularly worked          | 66.5           | 418.4          | 485.0          | 255.9        | 655.7        | 911.6          | 322.4          | 1 074.1        | 1 396.5        |
| On shift work in last 4 weeks          | 16.3           | 105.9          | 112.3          | 47.2         | 96.2         | 143.5          | 63.6           | 202.1          | 265.7          |
| No shift work in last 4 weeks          | 63.7           | 413.1          | 476.8          | 231.7        | 611.9        | 843.6          | 295.4          | 1 025.0        | 1 320.4        |
| <b>Total</b>                           | <b>80.0</b>    | <b>519.1</b>   | <b>599.1</b>   | <b>279.0</b> | <b>708.1</b> | <b>987.1</b>   | <b>359.0</b>   | <b>1 227.2</b> | <b>1 586.2</b> |
| <b>TOTAL</b>                           |                |                |                |              |              |                |                |                |                |
| Overtime regularly worked              | 1 435.8        | 716.1          | 2 151.8        | 146.5        | 87.9         | 234.4          | 1 582.3        | 803.9          | 2 386.2        |
| Overtime not regularly worked          | 1 640.8        | 1 428.3        | 3 069.1        | 471.5        | 763.2        | 1 234.7        | 2 112.3        | 2 191.5        | 4 303.8        |
| On shift work in last 4 weeks          | 491.1          | 293.3          | 784.3          | 80.4         | 112.6        | 193.0          | 571.5          | 405.9          | 977.4          |
| No shift work in last 4 weeks          | 2 585.5        | 1 851.1        | 4 436.6        | 537.6        | 738.4        | 1 276.0        | 3 123.1        | 2 589.5        | 5 712.6        |
| <b>Total</b>                           | <b>3 076.6</b> | <b>2 144.4</b> | <b>5 220.9</b> | <b>618.0</b> | <b>851.0</b> | <b>1 469.1</b> | <b>3 694.6</b> | <b>2 995.4</b> | <b>6 690.0</b> |

Source: Working Arrangements, Australia, August 1995 (6342.0.40.001).

As graph 6.42 shows, male employees aged 25 to 34 were the group most likely to have worked shift work in the previous four weeks (18%),

while employees aged 55 or more were the least likely to have worked shift work in the previous four weeks (13% of males and 11% of females).

**6.42 EMPLOYEES WORKING SHIFT WORK IN THE PREVIOUS FOUR WEEKS, August 1995**

Source: Working Arrangements, Australia, August 1995 (6342.0).

## Industrial relations

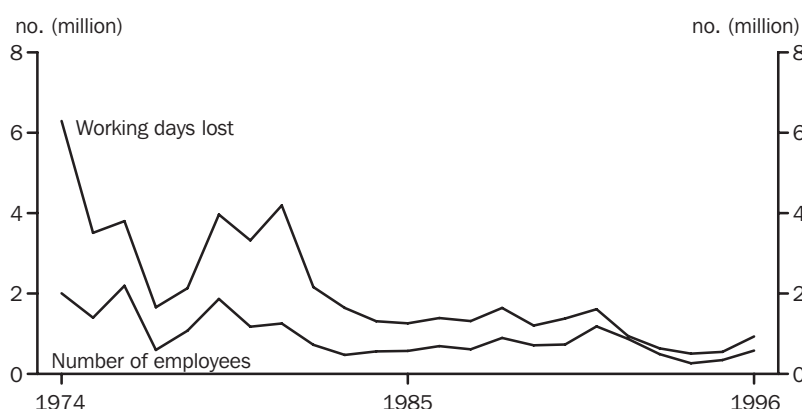
### Industrial disputes

This section presents statistics of industrial disputes involving the loss of 10 working days or more at the establishments where stoppages occurred. Working days lost refer to working days lost by workers directly or indirectly involved in disputes at the establishments where the stoppages occurred. In tables 6.44, 6.45 and 6.46 and graph 6.47, the statistics relate to

industrial disputes which occurred in each year, irrespective of the year in which they may have started or ended.

Over the period 1970 to 1996, the reported number of working days lost in any one year varied between 6.3 million (in 1974) and 0.5 million (in 1994). The number has been consistently less than one million since 1992, but both number of working days lost and number of employees involved have risen sharply in 1996 (graph 6.43 and table 6.44).

6.43 INDUSTRIAL DISPUTES



Source: *Industrial Disputes, Australia* (6321.0).

6.44 INDUSTRIAL DISPUTES, Number of Disputes and Employees Involved

| Year | Disputes(a)       |          | Employees involved |          | Working days lost |
|------|-------------------|----------|--------------------|----------|-------------------|
|      | Commenced in year | Total(a) | Newly involved(b)  | Total(a) |                   |
|      | no.               | no.      | '000               | '000     | '000              |
| 1991 | 1 032             | 1 036    | 1 178.9            | 1 181.6  | 1 610.6           |
| 1992 | 726               | 728      | 871.3              | 871.5    | 941.2             |
| 1993 | 607               | 610      | 489.2              | 489.6    | 635.8             |
| 1994 | 556               | 560      | 263.4              | 265.1    | 501.6             |
| 1995 | 635               | 643      | 335.4              | 344.3    | 547.6             |
| 1996 | 539               | 543      | 575.9              | 577.7    | 928.5             |

(a) Prior to September 1991 disputes affecting more than one industry and/or State have been counted as separate disputes in each industry and State and in the Australian total. (b) Comprises workers involved in disputes which commenced during the year and additional workers involved in disputes which continued from the previous year.

Source: *Industrial Disputes, Australia* (6322.0).

In 1996 there were 543 disputes reported, involving 577,700 employees and the loss of 928,500 working days (table 6.44). Although there was a decrease in the number of disputes compared to 1995, the number of working days lost increased by 70%.

Table 6.45 shows an industry dissection of working days lost over the period 1991 to 1996. The three industries showing large jumps in 1996 over 1995 were Construction; Education; Health and community services; and Coal mining.

Working days lost per thousand employees increased from 79 in 1995 to 131 in 1996 (table 6.46). The Coal mining industry continued to report the highest number of working days lost per thousand employees, 7,171 in 1996. Western Australia and Queensland showed the greatest number of working days lost per thousand employees, with the number for Western Australia jumping considerably (graph 6.47).

#### 6.45 INDUSTRIAL DISPUTES, Working Days Lost by Industry

|                                               | 1991           | 1992         | 1993         | 1994         | 1995         | 1996         |
|-----------------------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|
| Industry(a)                                   | '000           | '000         | '000         | '000         | '000         | '000         |
| Mining                                        |                |              |              |              |              |              |
| Coal                                          | 129.6          | 76.8         | 78.6         | 151.0        | 111.1        | 160.8        |
| Other                                         | 37.1           | 50.8         | 14.4         | 18.3         | 78.0         | 4.4          |
| Manufacturing                                 |                |              |              |              |              |              |
| Metal products; Machinery and equipment       | 664.0          | 121.4        | 160.4        | 45.4         | 54.8         | 58.6         |
| Other                                         | 169.3          | 154.6        | 77.7         | 78.3         | 105.1        | 44.9         |
| Construction                                  | 120.7          | 38.4         | 13.1         | 20.2         | 42.7         | 334.8        |
| Transport and storage; Communication services | 98.1           | 82.4         | 15.6         | 59.4         | 38.7         | 20.5         |
| Education; Health and community services      | 201.1          | 238.9        | 147.5        | 73.8         | 70.9         | 239.8        |
| Other industries(b)                           | 190.7          | 177.7        | 128.7        | 55.2         | 46.3         | 64.7         |
| <b>All industries</b>                         | <b>1 610.6</b> | <b>941.2</b> | <b>635.8</b> | <b>501.6</b> | <b>547.6</b> | <b>928.5</b> |

(a) Prior to January 1994, industry information was classified according to Australian Standard Industrial Classification (ASIC). From that time, industry data have been classified to Australian and New Zealand Standard Industrial Classification (ANZSIC). (b) Include: Agriculture, forestry and fishing; Electricity, gas and water supply; Wholesale trade; Retail trade; Accommodation, cafes and restaurants; Finance and insurance; Property and business services; Government administration and defence; Cultural and recreational services; Personal and other services.

Source: *Industrial Disputes, Australia* (6322.0).

#### 6.46 INDUSTRIAL DISPUTES, Working Days Lost Per '000 Employees(a)

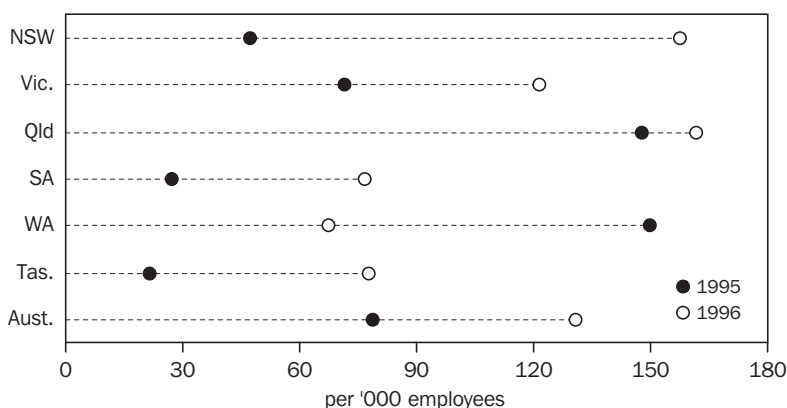
| Industry(b)                                   | 1991       | 1992       | 1993       | 1994      | 1995      | 1996       |
|-----------------------------------------------|------------|------------|------------|-----------|-----------|------------|
| Mining                                        |            |            |            |           |           |            |
| Coal                                          | 4 465      | 3 078      | 2 915      | 5 964     | 4 660     | 7 171      |
| Other                                         | 597        | 840        | 254        | 323       | 1 359     | 73         |
| Manufacturing                                 |            |            |            |           |           |            |
| Metal products; Machinery and equipment       | 1 555      | 309        | 426        | 117       | 142       | 146        |
| Other                                         | 268        | 243        | 121        | 123       | 160       | 70         |
| Construction                                  | 349        | 126        | 41         | 59        | 115       | 892        |
| Transport and storage; Communication services | 214        | 192        | 37         | 137       | 84        | 43         |
| Education; Health and community services      | 147        | 172        | 106        | 63        | 57        | 187        |
| Other industries(c)                           | 60         | 57         | 41         | 16        | 12        | 17         |
| <b>All industries</b>                         | <b>248</b> | <b>147</b> | <b>100</b> | <b>76</b> | <b>79</b> | <b>131</b> |

(a) The basis for the calculation of working days lost per thousand employees was changed in January 1995 to use estimates of employees taken from the Labour Force Survey only. Estimates have been recalculated on this basis for each 12 monthly period back to December 1990. (b) Prior to January 1994, industry information was classified according to ASIC. From that time, industry data have been classified to ANZSIC. (c) Include: Agriculture, forestry and fishing; Electricity, gas and water supply; Wholesale trade; Retail trade; Accommodation, cafes and restaurants; Finance, and insurance; Government administration and defence; Cultural and recreational services; Personal and other services.

Source: *Industrial Disputes, Australia* (6322.0).



6.47 INDUSTRIAL DISPUTES, Working Days Lost



Source: *Industrial Disputes, Australia* (6322.0).

Industrial disputes which lasted over two and less than five days accounted for 50% of all time lost in 1996. The major reported cause of disputes that ended in 1996 was Managerial policy (including award restructuring). This cause accounted for 426,500 working days lost (46% of the Australian total). About 74% of all disputes (accounting for 88% of working days lost) were settled by resumption without negotiation.

### Trade unions

In recent years a number of union amalgamations has seen the total number of unions decrease and a trend towards larger unions. The number of trade unions with less than 1,000 members has fallen from 76 in 1994 to 62 in 1996. Unions with membership of 50,000 or more have increased their percentage of total union membership from 77.2% in 1994 to 78.9% in 1996 (table 6.48).

A survey conducted in August 1996 found that, of the 7,062,100 employees aged 15 and over, 31% were trade union members in connection with their main job (table 6.49). The proportion of employees who were trade union members in connection with their main job has been steadily declining since August 1986, when membership accounted for 46% of employees.

Of permanent employees, 37% were trade union members. In comparison, the number of casual employees who were trade union members was 13%.

Communication services, and Electricity, gas and water supply were the most unionised industries, with 62% and 65% of employees respectively being trade union members. Agriculture, forestry and fishing was the least unionised at 6.6%.

6.48 NUMBER OF UNIONS AND MEMBERSHIP, By Size of Union

| Size of union (no. of members) | 30 June 1994  |                     |                               | 30 June 1995  |                     |                               | 30 June 1996  |                     |                               |
|--------------------------------|---------------|---------------------|-------------------------------|---------------|---------------------|-------------------------------|---------------|---------------------|-------------------------------|
|                                | No. of unions | No. of members '000 | Cumulative % of total members | No. of unions | No. of members '000 | Cumulative % of total members | No. of unions | No. of members '000 | Cumulative % of total members |
| Under 1 000                    | 76.0          | 21.7                | 0.8                           | 69.0          | 22.2                | 0.8                           | 62.0          | 18.3                | 0.7                           |
| 1 000–4 999                    | 33.0          | 76.0                | 3.3                           | 33.0          | 84.1                | 3.9                           | 30.0          | 70.0                | 3.2                           |
| 5 000–19 999                   | 20.0          | 200.2               | 10.3                          | 16.0          | 187.2               | 10.6                          | 16.0          | 189.1               | 9.9                           |
| 20 000–49 999                  | 11.0          | 360.5               | 22.8                          | 9.0           | 304.9               | 21.7                          | 9.0           | 314.4               | 21.1                          |
| 50 000 and over                | 17.0          | 2 231.8             | 100.0                         | 15.0          | 2 158.1             | 100.0                         | 15.0          | 2 208.5             | 100.0                         |
| <b>Total</b>                   | <b>157.0</b>  | <b>2 890.2</b>      | <b>..</b>                     | <b>142.0</b>  | <b>2 756.3</b>      | <b>..</b>                     | <b>132.0</b>  | <b>2 800.5</b>      | <b>..</b>                     |

Source: *Trade Union Statistics, Australia* (6323.0).

## 6.49 PROPORTION OF EMPLOYEES WHO WERE TRADE UNION MEMBERS, August 1996

| Industry                              | Males               |                  |             | Females             |                  |             | Persons             |                  |             |
|---------------------------------------|---------------------|------------------|-------------|---------------------|------------------|-------------|---------------------|------------------|-------------|
|                                       | Permanent employees | Casual employees | Total       | Permanent employees | Casual employees | Total       | Permanent employees | Casual employees | Total       |
|                                       | %                   | %                | %           | %                   | %                | %           | %                   | %                | %           |
| Agriculture, forestry and fishing     | 9.9                 | 4.6              | 7.1         | 10.3                | 2.6              | 5.0         | 9.7                 | 4.0              | 6.6         |
| Mining                                | 47.8                | 13.8             | 44.1        | 6.6                 | *0.0             | 5.5         | 42.2                | 10.8             | 38.5        |
| Manufacturing                         | 44.6                | 20.0             | 41.7        | 34.7                | 17.3             | 30.5        | 42.2                | 18.8             | 38.7        |
| Electricity, gas and water supply     | 72.8                | 22.9             | 70.3        | 40.5                | 22.8             | 38.0        | 68.3                | 22.9             | 65.4        |
| Construction                          | 42.1                | 14.3             | 32.8        | 9.7                 | 2.5              | 6.5         | 38.7                | 12.5             | 29.7        |
| Wholesale trade                       | 18.5                | 8.1              | 17.2        | 8.8                 | 10.7             | 9.3         | 15.9                | 9.4              | 14.8        |
| Retail trade                          | 20.0                | 19.4             | 19.8        | 32.6                | 18.2             | 25.0        | 25.6                | 18.7             | 22.5        |
| Accommodation, cafes and restaurants  | 18.8                | 13.1             | 16.3        | 23.0                | 10.3             | 14.8        | 20.7                | 11.3             | 15.4        |
| Transport and storage                 | 59.3                | 24.4             | 52.4        | 37.4                | 15.5             | 33.3        | 54.2                | 22.5             | 48.0        |
| Communication services                | 72.0                | 15.9             | 68.2        | 56.0                | 4.4              | 50.1        | 66.8                | 10.6             | 62.1        |
| Finance and insurance                 | 30.9                | 2.7              | 28.4        | 40.2                | 10.2             | 38.2        | 36.3                | 6.5              | 34.0        |
| Property and business services        | 15.7                | 7.0              | 13.2        | 11.4                | 4.9              | 9.4         | 13.7                | 6.0              | 11.4        |
| Government administration and defence | 56.8                | 6.4              | 52.6        | 47.3                | 8.9              | 39.1        | 53.1                | 8.1              | 46.9        |
| Education                             | 56.2                | 13.2             | 51.3        | 57.2                | 16.3             | 49.1        | 56.8                | 15.6             | 49.9        |
| Health and community services         | 39.4                | 10.3             | 34.2        | 40.6                | 10.0             | 33.7        | 40.3                | 10.0             | 33.8        |
| Cultural and recreational services    | 32.8                | 12.3             | 24.6        | 29.5                | 13.8             | 21.2        | 31.4                | 13.2             | 22.9        |
| Personal and other services           | 47.5                | 8.5              | 41.6        | 21.3                | 1.7              | 14.5        | 36.6                | 3.9              | 28.5        |
| <b>All industries</b>                 | <b>38.8</b>         | <b>13.9</b>      | <b>33.5</b> | <b>35.5</b>         | <b>12.4</b>      | <b>28.1</b> | <b>37.4</b>         | <b>13.1</b>      | <b>31.1</b> |

Source: Trade Union Members, Australia, August 1996 (6325.0).

## Training

Training continues to be a major element of labour market reform in Australia. The provision of training by enterprises is an integral component of this investment, but can impose a significant cost on employers. It is important to recognise the extent and distribution of these costs across enterprises in order to understand the level of commitment of employers to training.

### Training expenditure

Estimates of the expenditure by employers on the provision of structured training of their employees were collected in the 1996 Training Expenditure Survey (TES), which covered the

September quarter 1996. The survey defined structured training as all training activities which have a predetermined plan and format designed to develop employment-related skills and competencies. Total expenditure on structured training over the three months July to September 1996, by Australian employers, was estimated at \$1,179m. Expenditure for the same period in 1993 was \$1,103m; however while there was a small increase in total expenditure, employers, on average, spent less per employee on structured training and provided less hours of training per employee in 1996. The proportion of gross wages and salaries spent on training was significantly higher for large employers (3.2%), than for medium (1.9%) and small employers (1.2%) (table 6.50).

**6.50 TRAINING EXPENDITURE, By Employer Size — July to September 1996**

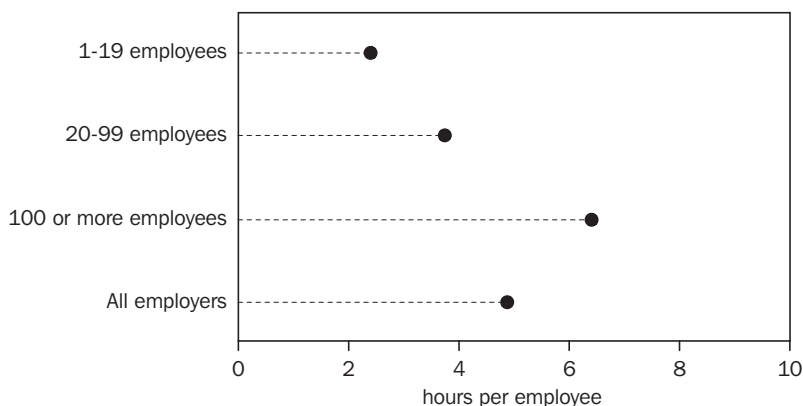
|                                                       | Unit               | No. of employees |       |             |         |
|-------------------------------------------------------|--------------------|------------------|-------|-------------|---------|
|                                                       |                    | 1–19             | 20–99 | 100 or more | Total   |
| Total training expenditure                            | \$m                | 115.0            | 168.4 | 895.4       | 1 178.8 |
| Training expenditure as % of gross wages and salaries | %                  | 1.2              | 1.9   | 3.2         | 2.5     |
| Expenditure per employee                              | \$                 | 71.3             | 135.8 | 255.6       | 185.5   |
| Training per employee                                 | hours              | 2.4              | 3.8   | 6.5         | 4.9     |
| Employers providing structured training               | % of all employers | 13.4             | 50.5  | 88.3        | 17.8    |

Source: *Employer Training Expenditure, Australia* (6353.0).

**Training received**

As graph 6.51 shows, on average, employees in large organisations received more than two and a half times the amount of structured training (6.5 hours) received by their counterparts in small organisations (2.4 hours), and one and a half times the amount received in medium-sized organisations (3.8 hours).

Employers provided most training in the field of 'Management and professional' training (0.9 hour) (table 6.52). Large employers provided the highest level of this training (1.3 hours), and spent four times as much on the wages and salaries costs for this training (\$29.30 per employee) as small employers (\$7.10), and over double that of medium-sized employers (\$13.50).

**6.51 AVERAGE TRAINING HOURS, By Employer Size — July to September 1996**

Source: *Employer Training Expenditure, Australia* (6353.0).

**6.52 FIELDS OF TRAINING, July to September 1996**

| Fields of training                          | Hours per employee | Dollars per employee |
|---------------------------------------------|--------------------|----------------------|
| Induction                                   | 0.4                | 5.6                  |
| General supervision                         | 0.3                | 5.0                  |
| General computing                           | 0.4                | 8.3                  |
| Health and safety                           | 0.4                | 6.8                  |
| Personal development                        | 0.3                | 6.0                  |
| Management and professional                 | 0.9                | 20.6                 |
| Technical and associate-professional        | 0.5                | 9.8                  |
| Trade and apprenticeship                    | 0.9                | 8.7                  |
| Sales, clerical/office and personal service | 0.6                | 8.9                  |
| Plant and machinery                         | 0.3                | 5.0                  |
| Other                                       | 0.1                | 1.8                  |
| <b>All fields</b>                           | <b>4.9</b>         | <b>86.4</b>          |

Source: *Employer Training Expenditure, Australia* (6353.0).

## Government employment programs

In the 1996–97 Budget the Commonwealth Government announced major changes to the delivery of labour market assistance. These involved the establishment, by May 1998, of:

- an employment services market in which private and community based employment service providers, along with an incorporated public employment service provider, will be contracted on a competitive basis to provide an integrated employment service for job seekers and employers; and
- a new independent service delivery agency which, under service delivery agreements, provides services to clients of the Department of Employment, Education, Training and Youth Affairs (DEETYA) and the Department of Social Security (DSS).

As a transitional step, before the establishment of the employment services market, a streamlined and simplified set of labour market programs was implemented from 7 October 1996. The following paragraphs provide details of the new framework for labour market programs in 1996–97.

The overall objective of the programs is to assist the efficient, effective and equitable functioning

of the labour market by reducing unemployment, in particular long-term unemployment, through the provision of services to job seekers and employers. These services include facilitating skills formation and retention in individuals, industries and regions.

The programs are grouped as follows:

- Employer incentives;
- Training for employment;
- Job seeker preparation and support;
- Support for apprentices, trainees and their employers;
- Enterprise and adjustment; and
- Training for Aboriginal and Torres Strait Islander peoples.

## Employer incentives

These programs help employers who give jobs to unemployed people through:

- Wage Subsidies (JobStart) — paid to employers hiring unemployed people who, because of their length of unemployment or other difficulties, are unable to compete on an equal basis in the labour market; and
- Special Employer Support (SES) — provides funding for brokers to arrange work experience and training placements for severely disadvantaged clients who are unlikely to secure employment through participation on a training program or with a wage subsidy.

A total of 92,414 placements were made under JobStart during 1996–97 at the cost of \$280.3m. This includes 2,929 placements under Full Wage Subsidy (formerly Work Experience for People with a Disability) at a total cost of \$6.6m.

Expenditure under SES in 1996–97 was \$67.7m, and 11,408 unemployed job seekers were assisted.

1996–97 also saw the cessation of new projects/placements under the Landcare and Environment Action program (LEAP), JobSkills and New Work Opportunities (NWO) programs. A total of 10,674 job seekers were assisted under the LEAP, JobSkills and NWO programs in 1996–97, and expenditure was \$272.2m.

## Training for employment

The programs help job seekers gain employment through the provision of a range of vocational training, including:

- Training for Employment (TEP) — helps job seekers gain employment through the provision or enhancement of vocational skills;
- Advanced English for Migrants program (AEMP) — provides advanced training in English as a second language to enable job seekers to obtain employment or to overcome barriers to allow their participation in vocational education and training; and
- SkillShare — provides skills training and employment related assistance for getting job seekers into jobs or into further education or training.

TEP was created in October 1996, subsuming most of the previous JobTrain and Accredited Training for Youth programs. Expenditure under TEP and the programs it subsumed was \$63.3m. In 1996–97, 24,834 job seekers were assisted under these programs and AEMP.

A total of 123,133 job seekers were assisted under the SkillShare program in 1996–97 at a cost of \$120.1m.

## Job seeker preparation and support

These programs help job seekers access employment and training opportunities by addressing financial and personal barriers which may be preventing this. The programs include:

- Job Search and Preparatory Assistance — aims to improve job seekers' chances of finding employment;
- Assessment and Interpreter Services — enables the CES to seek external professional advice on job seekers' barriers to employment and training and to provide interpreter services for clients; and
- Travel and Ancillary Assistance — helps job seekers meet the cost of travel associated with approved courses and job search, and the cost of entry to employment and training.

Expenditure for the Job Seeker Preparation and Support programs was \$150.0m in 1996–97. A total of 87,216 job seekers were assisted under the Job Search and Preparatory Assistance component and a further 46,522 people were assisted under the Ancillary Assistance and

Assessment and Interpreter Services components.

## Enterprise and adjustment

The Enterprise and Adjustment program includes:

- Regional Enterprise and Industry Assistance — provides labour market assistance through packages that are directed principally to regions, industries and enterprises where the employer is affected by structural adjustment or downturn in economic and business cycles; and
- New Enterprise Incentive Scheme (NEIS) — assists eligible unemployed people to establish their own new businesses. The assistance provided includes small business management training, income support and on-going business advice, and mentor support for the first year of business operation.

Regional, Enterprise and Industry Assistance incorporates the following:

- regional and employer assistance — including Business Incubators and Area Consultative Committees (ACCs);
- enterprise based measures — Training and Skills (TASK) program; and
- industry based measures — Textile, Clothing and Footwear (TCF), Passenger Motor Vehicle (PMV) and Australian National (AN) Labour Adjustment Packages (LAPs) and Forest Industry Labour Adjustment Package (FILAP).

There were about 370 new regional projects (including business incubators) approved in 1996–97.

During 1996–97, \$12.0 million was provided to support 46 business incubators, 25 of which were newly established. This includes funding for 35 studies into the feasibility of establishing new business incubators, their ongoing financial viability, options for location and operational management.

There were 86 new TASK projects approved in 1996–97; total expenditure for TASK in 1996–97 was \$5.5m.

There were 1,716 people in IAP training during 1996–97. Of this total, 94% were in full or part time vocational training, 6% were wage subsidy placements with new employers and 0.4% were

for relocation assistance. Total expenditure on the LAPs was \$8.1m.

Expenditure on NEIS in 1996–97 was \$112.2m and 7,492 people started self-employment in 5,625 new businesses. Of people assisted, 38% were women and 40% were long-term unemployed.

### Support for apprenticeships and traineeships

Apprenticeships and traineeships provide broad-based, structured entry level training, particularly for young people, and the opportunity for them to progress to permanent employment, including trade positions, a career or further education and training. Financial incentives (including wage subsidies for the long-term unemployed) encourage employers to engage new apprentices and trainees and maintain them in training until formal qualifications are attained. Additional assistance is available for apprentices with a disability and for apprentices and trainees who need to move away from home to obtain or maintain a traineeship or apprenticeship.

In 1996–97 the employer incentive regime assisted some 50,000 apprentices, including payments to employers for 26,800 commencements, 4,400 recommencements and 18,800 completions. Expenditure in support of apprenticeships in 1996–97 was \$94.0m, including \$12.0m for wage subsidies.

There were over 500 disabled apprentices in training under the Disabled Apprenticeship Wage Subsidy (DAWS) programme at 30 June 1997. Expenditure on DAWS in 1996–97 was \$2.9m. Almost 3,400 first and second year apprentices started receiving assistance under the Living Away From Home Allowance (LAFHA) in 1996–97. Expenditure for apprentices from LAFHA was \$8.4m in 1996–97.

Some 52,000 traineeship commencements were achieved in 1996–97 with associated employer incentives being paid. Expenditure in support of traineeships, including wage subsidies and LAFHA, in 1996–97 was \$150.4m.

### Training for Aboriginals and Torres Strait Islanders Program (TAP)

TAP provides a package of flexible assistance designed specifically to increase the skills and employment levels of Aboriginal and Torres Strait Islander peoples by providing training and

employment opportunities. TAP has two components:

- Employment Strategies — aim to provide ongoing employment and career development opportunities for Aboriginal and Torres Strait Islander peoples within the structure of the host employer organisation.
- Direct Assistance is delivered through the CES, and comprises three elements:
  - Skills Development;
  - Transition Assistance; and
  - Formal Training.

In 1996–97, funding for the Employment Strategies component of TAP was \$18.4m for a total of 1,200 placements.

The Direct Assistance component delivered through the CES resulted in 6,500 commencements, including 5,600 job placements, at a total cost of \$47.3 m. Almost 3,600 traineeships were achieved during 1996–97.

### Program performance information

Performance information used for labour market programs relates to program commencements as well as program outcomes. The number of commencements in individual programs reflects the numbers of eligible clients and their individual needs as assessed by case managers or CES officers.

Data on program outcomes are obtained from the DEETYA's post-program monitoring (PPM) surveys of clients undertaken after the end of their participation in labour market programs. A positive program outcome is identified if the client is in unsubsidised employment or in non labour market program funded education or training three months after the program assistance has ceased.

Table 6.53 provides details of program commencements in 1996–97 and post-program outcomes. In 1996–97 a total of 414,715 job seekers were assisted under the above listed programs, of which 58% were men and 42% were women.

Overall, 45.4% of assisted job seekers had a positive outcome three months after participation in the programs. The highest positive outcomes were recorded by jobseekers assisted by wage subsidy programs, insofar as they were in full or part-time employment (or

attending an educational or training institution) within three months of leaving an employment program such as JobStart (63.5% had a positive

outcome) and the National Training Wage (68.4%).

### 6.53 LABOUR MARKET PROGRAMS, 1996–97

|                                                      | Commencements  |                |                | Positive outcomes |             |             |
|------------------------------------------------------|----------------|----------------|----------------|-------------------|-------------|-------------|
|                                                      | Males          | Females        | Total          | Males             | Females     | Total       |
| Labour Market Program                                | no.            | no.            | no.            | %                 | %           | %           |
| Employer incentives                                  |                |                |                |                   |             |             |
| JobStart                                             | 62 662         | 29 752         | 92 414         | 60.6              | 69.1        | 63.5        |
| National Training Wage                               | 25 044         | 23 393         | 48 437         | 65.3              | 71.1        | 68.4        |
| Special Employer Support                             | 7 657          | 3 751          | 11 408         | (a)n.a.           | (a)n.a.     | (a)n.a.     |
| New Work Opportunities                               | 4 919          | 1 896          | 6 815          | 19.7              | 31.5        | 22.9        |
| JobSkills                                            | 1 378          | 1 065          | 2 443          | 29.4              | 42.4        | 35.4        |
| LEAP                                                 | 1 416          | 343            | 1 416          | 31.8              | 36.3        | 33.2        |
| Training for employment                              |                |                |                |                   |             |             |
| Skillshare                                           | 63 250         | 59 883         | 123 133        | 35.6              | 46.0        | 41.0        |
| Training for Employment                              | 12 171         | 7 832          | 20 003         | 46.1              | 52.7        | 48.6        |
| JobTrain and ATY                                     | 2 940          | 1 891          | 4 831          | 40.0              | 50.2        | 44.8        |
| Job seeker preparation and support                   | 50 179         | 37 037         | 87 216         | 39.3              | 47.8        | 43.1        |
| Training for Aboriginals and Torres Strait Islanders |                |                |                |                   |             |             |
| Employer Strategies(b)                               | 533            | 681            | 1 214          | (a)n.a.           | (a)n.a.     | (a)n.a.     |
| Direct Assistance                                    | 4 271          | 2 235          | 6 506          | 43.0              | 56.0        | 48.6        |
| Enterprise adjustment                                |                |                |                |                   |             |             |
| Regional Assistance Program                          | 507            | 868            | 1 375          | 53.4              | 37.8        | 42.0        |
| New Enterprise Incentive Scheme                      | 3 326          | 4 178          | 7 504          | 82.4              | 79.0        | 81.8        |
| <b>Total</b>                                         | <b>239 909</b> | <b>174 806</b> | <b>414 715</b> | <b>41.4</b>       | <b>50.6</b> | <b>45.4</b> |

(a) There are insufficient numbers of outcomes for figures to be compiled. (b) Estimated figures.

Source: Department of Employment, Education, Training and Youth Affairs.

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## Introduction

The economic wellbeing or standard of living of individuals and families is largely dependent on the economic and social resources available to provide for the consumption of goods and services and for participation in the life of society. Such resources may be in the form of cash income received from wages and salaries or investments, or as income support from government. Other factors can also contribute to economic resources, including personal resources such as savings, services such as aged care, respite care and child care from government and welfare organisations, and assistance from family and friends.

Government programs aim to help the economically disadvantaged to achieve social and economic outcomes and to participate in society. Such programs include those of the Department of Social Security (DSS), which provides income security for the retired, people with disabilities, carers, unemployed people and families with children. Other departments provide income support for other special groups, such as war veterans, war widows and their families, and students. In addition to cash income, government programs also help those with low incomes to meet payments for housing through rent assistance, and for a range of goods and services through pensioner concession and health cards and other services aimed at helping people in personal and social hardship. Other types of programs aim to encourage the participation of people with disabilities, such as those provided by the Disability Services Program in the Department of Health and Family Services which assist with employment and advocacy.

This chapter provides information on the levels and sources of income of Australia's population and on the levels and patterns of expenditure on consumer goods and services. *Year Book, Australia, 1997* provided information on the effects of selected government benefits and taxes on household income, showing which household types benefit most from government income support and services in areas such as health, and which household types pay the most through personal and indirect taxes.

This chapter then provides information about the main income support programs of the Commonwealth Government, describing the

eligibility requirements, numbers of beneficiaries and government expenditure on these programs. It covers these in three sections: *Income support programs of the Department of Social Security; Community support programs of the Department of Health and Family Services; and Services provided by the Department of Veterans' Affairs.*

Sections are included on the nature and extent of child care usage, and on people's unmet need for assistance because of age and disability. Both sections are based on ABS surveys, namely the 1996 Child Care Survey and the 1993 Survey of Disability, Ageing and Carers.

## Household income and expenditure

### Household income

Regular income is the means by which most individuals and families finance current consumption and make provision for the future through saving and investment. The level of cash income can be used as an indicator of the standard of living for most of the population. Information about the levels and sources of income is used to monitor shares of income going to labour, capital and transfers. From a social welfare perspective, analysis of cash income distribution indicates which groups in the population are most disadvantaged, and provides information on the number and characteristics of those needing access to government services.

The ABS conducted six income distribution surveys between 1968 and 1990. In July 1994 the ABS started collecting income data on a continuous basis in the Survey of Income and Housing Costs. These surveys have provided information on the current and annual income of individuals and family units as well as on their characteristics such as age, education, labour force participation, source of income, and size and composition of family units.

In addition, the ABS has conducted five household expenditure surveys. The main purpose of these surveys is to produce estimates of household expenditure on different commodities and services. Information on current income is collected to explain variations in expenditure levels and to identify groups of special interest (e.g. government income support recipients and low income households).

The most recent information on current income distribution is available from the 1995–96 Survey of Income and Housing Costs. Income refers to gross receipts of recurring and usually regular cash flows at the time of interview. It comprises cash receipts from wages and salaries, profit or loss from own business, property income in the form of interest, rent and dividends, private transfers such as superannuation and child support, and cash transfers from government in the form of benefits and allowances.

While income is usually received by individuals, analyses of the distribution of income are traditionally based on incomes of families or groups of individuals, which reflects the sharing of income that takes place within families. The following analysis is based on the income of a restricted family grouping called an 'income unit', which assumes that income is shared between partners in couple families and between parents and dependent children. Other family members such as non-dependent children are treated as separate income units. Analyses of income distribution using different units, such as families and households, provide different results.

### Income distribution

As table 7.1 shows, in 1995–96 the average gross weekly income for all income units was \$609. The median gross weekly income (i.e. the midpoint when all units are ranked in order of income) was considerably lower at \$457. This difference reflects the typically asymmetric distribution of income where a large number of units have nil or very low incomes and a smaller number have very high incomes.

Income units cover a wide variety of individuals and family types and include varying numbers of people. These range from young single people just out of school, to couples with dependent children, through to elderly retired couples or single people, that is, units at various stages of the life cycle and working career. It is therefore not surprising that income is distributed unevenly across all income units. This was the case in 1995–96 when income units in the lowest quintile (i.e. the lowest 20% of units when ranked according to income) received an average gross weekly income of \$117, compared to \$1,469 received by those in the highest quintile.

Income units in the lowest quintile were mainly single people. One-third of these were living

with parents or with relatives. Few people were employed and most relied on government pensions and allowances as their principal source of income.

In comparison, income units in the highest quintile were usually couples with or without dependent children, and most had two earners. Their principal source of income was mainly wages and salaries, with very few relying on government pensions and allowances.

### Life cycle stages of income units

Levels of income are related to life cycle stages such as youth, and the formation, maturation and dissolution of nuclear families (table 7.1).

In 1995–96 young independent single persons aged under 35 had an average weekly income of \$387. However, this group had a wide range of incomes resulting, partly, from the differing attachment to the labour force of young people making the transition from full-time education to full-time work. The mean income of those aged 25–34 was considerably higher than that of those under 25 (at \$495 and \$313 respectively).

As young people enter into relationships their income rises as they often have two income earners contributing to their family income. Young couples under 35 with no dependent children received an average of \$1,092 per week. For the majority (83%) of this group both partners were in employment.

For couples the birth of the first child and the early years of child rearing are associated with reduced labour force participation and often accompanied by a fall in family income. The average weekly income for couples with the eldest child under 5 years old was \$925. Income rises again as the children and parents grow older. Couples whose eldest dependent child was over 15 had an average income of \$1,080 per week.

For most parents, the need to provide for dependent children has ended by the time they reach their mid fifties. These post child-rearing years are accompanied by a decline in income. Couples in the 55–64 age group had an average income of \$658 per week. This group had a wide range of incomes resulting from the transition from full-time employment to retirement. For couples aged over 65 the average income was \$429 per week.

## 7.1 ALL INCOME UNITS, Selected Characteristics by Gross Weekly Income Quintile Groups — 1995–96

|                                                | Unit | Lowest<br>20% | Second<br>quintile | Third<br>quintile | Fourth<br>quintile | Highest<br>20% | All<br>income<br>units |
|------------------------------------------------|------|---------------|--------------------|-------------------|--------------------|----------------|------------------------|
| Upper boundary of quintile group               | \$   | 196           | 360                | 561               | 932                | ..             | —                      |
| Mean income                                    | \$   | 117           | 277                | 459               | 721                | 1 469          | 609                    |
| Median income                                  | \$   | 156           | 281                | 457               | 702                | 1 257          | 457                    |
| Principal source of income (% of income units) |      |               |                    |                   |                    |                |                        |
| Weekly employee income                         | %    | 9.3           | 27.8               | 69.8              | 83.3               | 87.0           | 55.5                   |
| Weekly own business income                     | %    | 2.7           | 4.0                | 6.6               | 8.6                | 10.3           | 6.5                    |
| Weekly government pensions and allowances      | %    | 67.3          | 60.6               | 14.9              | 2.0                | **0.1          | 29.0                   |
| Weekly income from other sources               | %    | 9.9           | 7.6                | 8.6               | 6.2                | 2.6            | 7.0                    |
| Total(a)                                       | %    | 100.0         | 100.0              | 100.0             | 100.0              | 100.0          | 100.0                  |
| Income unit type (% of income units)           |      |               |                    |                   |                    |                |                        |
| Couple with dependent children                 | %    | 3.8           | 7.1                | 17.0              | 35.5               | 50.2           | 22.7                   |
| Couple without dependent children              | %    | 6.5           | 32.8               | 20.9              | 24.6               | 38.3           | 24.6                   |
| One parent                                     | %    | 2.1           | 10.3               | 6.4               | 4.1                | 1.6            | 4.9                    |
| One person                                     | %    | 87.6          | 49.7               | 55.7              | 35.8               | 10.0           | 47.8                   |
| Total                                          | %    | 100.0         | 100.0              | 100.0             | 100.0              | 100.0          | 100.0                  |
| Earners                                        |      |               |                    |                   |                    |                |                        |
| None                                           | %    | 82.0          | 62.9               | 18.9              | 6.1                | 1.4            | 34.3                   |
| One                                            | %    | 15.3          | 33.9               | 73.8              | 64.9               | 24.6           | 42.5                   |
| Two                                            | %    | 2.7           | 3.2                | 7.3               | 29.0               | 74.0           | 23.2                   |
| Total                                          | %    | 100.0         | 100.0              | 100.0             | 100.0              | 100.0          | 100.0                  |
| Tenure type (% of income units)                |      |               |                    |                   |                    |                |                        |
| Owners without a mortgage                      | %    | 32.3          | 41.3               | 26.8              | 29.5               | 31.9           | 32.4                   |
| Owners with a mortgage                         | %    | 5.4           | 8.3                | 14.4              | 33.3               | 48.3           | 21.9                   |
| Renters                                        |      |               |                    |                   |                    |                |                        |
| Public                                         | %    | 9.3           | 7.1                | 4.7               | 2.1                | *0.5           | 4.7                    |
| Private                                        | %    | 17.7          | 19.8               | 26.2              | 21.1               | 14.8           | 19.9                   |
| Other                                          | %    | 13.8          | 12.0               | 17.6              | 7.7                | 1.6            | 10.6                   |
| Total renters                                  | %    | 40.7          | 38.9               | 48.5              | 31.0               | 16.9           | 35.2                   |
| Other, including rent free                     | %    | 21.5          | 11.5               | 10.2              | 6.2                | 2.9            | 10.5                   |
| Total                                          | %    | 100.0         | 100.0              | 100.0             | 100.0              | 100.0          | 100.0                  |
| Estimated number of income units               |      |               |                    |                   |                    |                |                        |
| Capital city                                   | '000 | 1 073         | 1 081              | 1 179             | 1 176              | 1 269          | 5 777                  |
| Rest of State                                  | '000 | 704           | 700                | 596               | 603                | 509            | 3 111                  |
| Total                                          | '000 | 1 777         | 1 781              | 1 774             | 1 779              | 1 777          | 8 888                  |

(a) Includes income units with nil or negative income from all sources.

Source: 1995–96 Survey of Income and Housing Costs.

## 7.2 LIFE CYCLE GROUPS, Selected Characteristics by Gross Weekly Income — 1995–96

|                                                | Unit | One person aged under 35 | Couple without dependent children, reference person aged under 35 | Couple with dependent children and age of eldest child (years) |       | Couple without dependent children, reference person aged 65 and over |             | One person aged 65 and over |
|------------------------------------------------|------|--------------------------|-------------------------------------------------------------------|----------------------------------------------------------------|-------|----------------------------------------------------------------------|-------------|-----------------------------|
|                                                |      |                          |                                                                   | Under 5                                                        | 15–24 | 55–64                                                                | 65 and over |                             |
| Mean income                                    | \$   | 387                      | 1 092                                                             | 925                                                            | 1 080 | 658                                                                  | 429         | 226                         |
| Median income                                  | \$   | 375                      | 1 056                                                             | 780                                                            | 977   | 510                                                                  | 321         | 184                         |
| Principal source of income (% of income units) |      |                          |                                                                   |                                                                |       |                                                                      |             |                             |
| Weekly employee income                         | %    | 72.2                     | 91.5                                                              | 77.2                                                           | 72.9  | 41.1                                                                 | 4.3         | *1.1                        |
| Weekly own business income                     | %    | 1.6                      | 5.5                                                               | 10.8                                                           | 12.6  | 15.2                                                                 | 3.0         | *0.8                        |
| Weekly government pensions and allowances      | %    | 17.1                     | *1.4                                                              | 10.7                                                           | 11.1  | 26.8                                                                 | 70.2        | 80.0                        |
| Weekly income from other sources               | %    | 4.3                      | *1.0                                                              | *1.0                                                           | *2.5  | 15.1                                                                 | 22.0        | 17.4                        |
| Total(a)                                       | %    | 100.0                    | 100.0                                                             | 100.0                                                          | 100.0 | 100.0                                                                | 100.0       | 100.0                       |
| Earners                                        |      |                          |                                                                   |                                                                |       |                                                                      |             |                             |
| None                                           | %    | 23.9                     | *1.5                                                              | 10.2                                                           | 10.7  | 34.6                                                                 | 86.2        | 96.5                        |
| One                                            | %    | 76.1                     | 15.4                                                              | 45.6                                                           | 25.0  | 27.1                                                                 | 7.4         | 3.5                         |
| Two                                            | %    | ..                       | 83.1                                                              | 44.2                                                           | 64.2  | 38.3                                                                 | 6.4         | ..                          |
| Total                                          | %    | 100.0                    | 100.0                                                             | 100.0                                                          | 100.0 | 100.0                                                                | 100.0       | 100.0                       |
| Tenure type (% of income units)                |      |                          |                                                                   |                                                                |       |                                                                      |             |                             |
| Owners without a mortgage                      | %    | 1.9                      | 6.9                                                               | 16.2                                                           | 46.2  | 78.1                                                                 | 85.3        | 64.0                        |
| Owners with a mortgage                         | %    | 6.9                      | 46.3                                                              | 51.8                                                           | 42.7  | 14.1                                                                 | 4.3         | *1.9                        |
| Renters                                        |      |                          |                                                                   |                                                                |       |                                                                      |             |                             |
| Public                                         | %    | 1.4                      | **0.4                                                             | *3.4                                                           | *2.2  | *2.4                                                                 | 3.0         | 9.2                         |
| Private                                        | %    | 32.6                     | 38.9                                                              | 21.0                                                           | 7.5   | 4.0                                                                  | 3.7         | 7.3                         |
| Other                                          | %    | 28.8                     | *2.3                                                              | 4.1                                                            | *0.6  | *0.6                                                                 | **0.3       | 7.7                         |
| Total renters                                  | %    | 62.8                     | 41.6                                                              | 28.5                                                           | 10.3  | 7.0                                                                  | 6.9         | 24.2                        |
| Other, including rent free                     | %    | 28.4                     | 5.2                                                               | 3.5                                                            | *0.8  | *0.8                                                                 | 3.5         | 9.9                         |
| Total                                          | %    | 100.0                    | 100.0                                                             | 100.0                                                          | 100.0 | 100.0                                                                | 100.0       | 100.0                       |
| Estimated number of income units               | '000 | 2 265                    | 356                                                               | 439                                                            | 588   | 544                                                                  | 675         | 811                         |

(a) Includes income units with nil or negative income from all sources.

Source: *Income Distribution, Australia* (6523.0).

## Household expenditure

Information about income provides one indicator of the standard of living. However it does not always accurately reflect command over goods and services, particularly where income is variable or where expenditure is financed through running down assets or acquisition of debts. In such cases the levels and patterns of household expenditure may provide an alternative measure of living standards.

Household expenditure information can be used to examine the relative standards of living of different household types such as those with low incomes, large families, sole parent families and pensioner households.

The latest expenditure information is available from the 1993–94 Household Expenditure Survey. This was the fifth major survey of its kind

undertaken by the ABS. It collected detailed information about expenditure, income and characteristics of households in Australia.

The household is used as the basic unit of analysis, because much of the expenditure covers household items. If smaller units are adopted, for example each person, then it is difficult to attribute to individual household members the use of shared items such as accommodation and household goods.

### Levels of expenditure

In 1993–94, Australian households spent an average of \$602 per week on goods and services (table 7.3). The level of household expenditure is closely related to characteristics of households, most particularly their income but also household composition and household size. Households in the lowest income quintile had

an average expenditure of \$303 compared to \$994 spent by those in the highest quintile. The proportion of total household expenditure spent on different goods and services also differs between low and high income households. For example, for households in the lowest quintile the proportion of expenditure on food and non-alcoholic beverages was 20%, compared with 17% in the highest quintile.

The level of household income is itself related to social and demographic characteristics of the household members. While 64% of households in the lowest quintile were lone person households, in the highest quintile the households were predominantly couple households and had, on average, 3–4 members.

Household expenditure also varies in accordance with stages of the family life cycle, generally rising through the early stages of family

creation and, with increasing family size, reaching a peak as family children mature to adulthood. In subsequent stages of the life cycle, household expenditure declines as children leave home and household size declines. This trend follows very closely the trend in household income over the life cycle.

## Income support programs of the Department of Social Security

On 1 July 1947, with the passage of the *Social Services Consolidation Act 1947*, all Acts providing social service benefits were amalgamated into the *Social Security Act 1947*. This Act was repealed and replaced with the *Social Security Act 1991* which commenced on 1 July 1991.

### 7.3 HOUSEHOLD EXPENDITURE AND CHARACTERISTICS, By Household Income Quintile(a) — 1993–94

|                                                                    | Unit | Lowest<br>20% | Second<br>quintile | Third<br>quintile | Fourth<br>quintile | Highest<br>20% | All<br>households |
|--------------------------------------------------------------------|------|---------------|--------------------|-------------------|--------------------|----------------|-------------------|
| Upper boundary of income quintile group                            | \$   | 267           | 458                | 741               | 1 101              | —              | —                 |
| Mean gross weekly income                                           | \$   | 152           | 354                | 592               | 909                | 1 609          | 723               |
| Proportion of total income from government pensions and allowances | %    | 91.8          | 53.6               | 15.6              | 5.5                | 1.5            | 13.7              |
| Household composition (% of households)                            |      |               |                    |                   |                    |                |                   |
| Couple only                                                        | %    | 17.9          | 41.5               | 21.2              | 23.5               | 25.3           | 25.9              |
| Couple with dependent children only                                | %    | 6.3           | 16.1               | 33.0              | 34.5               | 28.5           | 23.7              |
| Couple other                                                       | %    | 2.2           | 5.0                | 10.1              | 16.7               | 28.0           | 12.4              |
| One parent                                                         | %    | 7.3           | 12.1               | 8.0               | 3.5                | 2.0            | 6.6               |
| Lone person                                                        | %    | 63.4          | 17.5               | 16.5              | 8.5                | 2.9            | 21.8              |
| Other household types                                              | %    | 2.9           | 7.8                | 11.2              | 13.3               | 13.2           | 9.7               |
| Total                                                              | %    | 100.0         | 100.0              | 100.0             | 100.0              | 100.0          | 100.0             |
| Expenditure (as % of total expenditure)                            |      |               |                    |                   |                    |                |                   |
| Current housing costs (selected dwelling)                          | %    | 15.6          | 15.3               | 14.7              | 14.4               | 12.8           | 14.2              |
| Fuel and power                                                     | %    | 4.0           | 3.5                | 3.0               | 2.6                | 2.2            | 2.8               |
| Food and non alcoholic beverages                                   | %    | 19.8          | 20.3               | 18.9              | 18.1               | 17.2           | 18.4              |
| Alcoholic beverages                                                | %    | 2.5           | 2.9                | 3.0               | 2.8                | 3.0            | 2.9               |
| Tobacco                                                            | %    | 2.1           | 2.2                | 1.8               | 1.5                | 0.9            | 1.5               |
| Clothing and footwear                                              | %    | 4.5           | 4.4                | 5.3               | 5.8                | 6.5            | 5.6               |
| Household furnishings and equipment                                | %    | 6.1           | 6.5                | 6.3               | 6.3                | 7.1            | 6.6               |
| Household services and operation                                   | %    | 6.6           | 6.1                | 5.4               | 5.0                | 4.6            | 5.2               |
| Medical care and health expenses                                   | %    | 4.9           | 4.3                | 4.2               | 4.5                | 4.6            | 4.5               |
| Transport                                                          | %    | 13.3          | 15.3               | 15.6              | 16.3               | 15.8           | 15.5              |
| Recreation                                                         | %    | 12.6          | 11.8               | 12.6              | 12.5               | 14.7           | 13.2              |
| Personal care                                                      | %    | 1.8           | 1.9                | 1.9               | 1.9                | 1.9            | 1.9               |
| Miscellaneous commodities and services                             | %    | 6.2           | 5.6                | 7.3               | 8.3                | 8.7            | 7.6               |
| Total                                                              | %    | 100.0         | 100.0              | 100.0             | 100.0              | 100.0          | 100.0             |
| Average weekly expenditure on all commodities and services         | \$   | 303           | 426                | 573               | 714                | 994            | 602               |

(a) Quintile groups are 20% groupings of households ranked in ascending order according to each household's total gross weekly income.

Source: 1993–94 Household Expenditure Survey.

The main income support payments provided by the Commonwealth under the 1991 Act for the financial years 1994–97 and the date on which each payment came into effect are listed in table 7.4.

An outline, together with associated statistics, of the main social security payments in effect throughout the 1996–97 financial year is given below.

#### 7.4 INCOME SUPPORT PAYMENTS

|                                              | 1994–95           | 1995–96           | 1996–97           |                   |
|----------------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Type of payment                              | \$'000            | \$'000            | \$'000            | Date of operation |
| <b>The retired</b>                           |                   |                   |                   |                   |
| Age Pension(a)                               | 11 884 066        | 12 383 929        | 13 204 658        | 1 July 1909       |
| <b>People with disabilities and the sick</b> |                   |                   |                   |                   |
| Disability Support Pension(a)(b)             | 4 524 754         | 4 917 412         | 5 299 148         | 12 November 1991  |
| Disability Wage Supplement                   | 81                | 556               | 2 193             | —                 |
| Rehabilitation Allowance(c)(d)               | 521               | 7                 | –36               | 1 March 1983      |
| Sickness Allowance(e)                        | 413 234           | 354 012           | 144 280           | 12 November 1991  |
| Mobility Allowance                           | 30 523            | 34 149            | 38 118            | 1 April 1983      |
| Child Disability Allowance                   | 185 066           | 213 658           | 233 106           | 15 November 1987  |
| <b>The unemployed</b>                        |                   |                   |                   |                   |
| Job Search Allowance                         | 3 389 154         | 3 141 368         | 723 612           | 1 July 1991       |
| Newstart Allowance(f)                        | 3 671 852         | 2 623 805         | 5 324 218         | 1 July 1991       |
| Mature Age Allowance(g)                      | 356 551           | 436 551           | 472 469           | 1 March 1994      |
| Partner Allowance(h)                         | ..                | 462 547           | 497 841           | 20 September 1994 |
| Youth Training Allowance(i)                  | ..                | 46 513            | 159 138           | 1 January 1995    |
| <b>Families with children</b>                |                   |                   |                   |                   |
| Basic Family Payment(j)(k)                   | 2 016 804         | 1 013 184         | ..                | 1 January 1993    |
| Additional Family Payment(k)(l)              | 3 534 840         | 1 828 446         | ..                | 1 January 1993    |
| Family Payment(k)                            | ..                | 3 036 055         | 6 284 731         | 1 January 1996    |
| Maternity Allowance                          | ..                | 65 165            | 196 716           | 1 February 1996   |
| Home Child Care Allowance(m)                 | 617 555           | ..                | ..                | 29 September 1994 |
| Parenting Allowance(m)                       | ..                | 2 091 321         | 2 216 628         | 1 July 1995       |
| Sole Parent Pension                          | 2 552 272         | 2 760 105         | 2 992 322         | 1 March 1989      |
| Double Orphan Pension                        | 1 595             | 1 654             | 1 681             | 26 September 1973 |
| Family Tax Payment                           | ..                | ..                | 288 564           | —                 |
| <b>Provision for special circumstances</b>   |                   |                   |                   |                   |
| Special Benefit                              | 224 416           | 157 088           | 132 289           | 1 July 1945       |
| Widow Class 'B' Pension                      | 481 185           | 464 952           | 296 905           | 30 June 1942      |
| Widow Allowance                              | 31 752            | 88 233            | 117 273           | 1 January 1995    |
| Widowed Persons Allowance(n)                 | 1 117             | ..                | ..                | 1 March 1989      |
| Bereavement Allowance(n)                     | ..                | 1 296             | 1 178             | 1 January 1995    |
| Disaster Relief Payment(d)                   | ..                | ..                | –12               | 1 August 1990     |
| <b>Total DSS income support</b>              | <b>33 917 337</b> | <b>37 047 099</b> | <b>38 557 021</b> | <b>—</b>          |

(a) Includes Wife and Carer Pensions. (b) Invalid Pension and Sheltered Employment Allowance were replaced by Disability Support Pension from 12 November 1991. (c) There have been no new grants of Rehabilitation Allowance since 12 November 1991. (d) Negative figure indicates net receipt. (e) Sickness Benefit was replaced by Sickness Allowance from 12 November 1991. (f) Job Search Allowance was absorbed into Newstart Allowance from 20 September 1996. (g) Includes Mature Age Partner Allowance. (h) Expenditure was separately appropriated from 1 July 1995. (i) Youth Training Allowance was administered by DSS from 11 March 1996. Expenditure shown from that date. (j) Family Allowance was replaced by Basic Family Payment from 1 January 1993. (k) Basic and Additional Family Payment were replaced by Family Payment from 1 January 1996. (l) Family Allowance Supplement was replaced by Additional Family Payment from 1 January 1993. (m) Home Child Care Allowance was absorbed into Parenting Allowance from 1 July 1995. (n) Widowed Persons Allowance was replaced by Bereavement Allowance from 1 January 1995.

Source: Department of Social Security.



## Payments for the retired

Age Pension is payable to men who are over 65 years of age and women who are over 61 years of age and is subject to residence qualifications. The minimum Age Pension age for women was raised to 61 years from 1 July 1997. The minimum qualifying age will be increased by six months at two year intervals from that date until 1 July 2013, when it will be 65 years. The number of age pensioners at June 1997 is shown in table 7.5.

Age Pension is means-tested based on pensioners' income and assets.

## Payments for people with disabilities and the sick

### Disability Support Pension

Disability Support Pension is paid to a person aged 16 or over who has a physical, intellectual

or psychiatric impairment of at least 20% and who is assessed as being unable to work for at least 30 hours a week at full award wages, or to be retrained for such work, for at least two years. Table 7.6 shows the number of disability support pensioners at June 1997.

Disability Support Pension for people aged 21 and over is paid at the same rate as Age Pension and is subject to the same income and assets tests, except for permanently blind recipients, who are not subject to either the income or assets test. 'Junior' rates apply to those under 21. These are in line with the rates paid to Sickness Allowees, but with a supplement of \$72.60 per fortnight. Junior rates are not subject to parental income or assets tests.

Disability Support pensioners and other people with disabilities can gain access to rehabilitation, training, labour market programs or labour force re-entry assistance.

**7.5 AGE PENSIONERS**

|                                                    |        | June       |            |            |            |
|----------------------------------------------------|--------|------------|------------|------------|------------|
|                                                    | Unit   | 1994       | 1995       | 1996       | 1997       |
| Age group (years)                                  |        |            |            |            |            |
| 60–64                                              | no.    | 210 482    | 211 685    | 193 988    | 208 309    |
| 65–69                                              | no.    | 431 890    | 447 525    | 464 417    | 481 624    |
| 70–74                                              | no.    | 322 984    | 319 538    | 335 197    | 364 766    |
| 75 and over                                        | no.    | 616 518    | 599 950    | 609 232    | 625 515    |
| Males                                              | no.    | 514 217    | 554 571    | 570 328    | 597 859    |
| Females                                            | no.    | 1 067 657  | 1 034 127  | 1 032 506  | 1 082 355  |
| Persons                                            | no.    | 1 581 874  | 1 578 698  | 1 602 834  | 1 680 214  |
| Wife pensioners (age)                              | no.    | 36 539     | 39 611     | 41 125     | 36 577     |
| Carer pensioners (age)                             | no.    | 7 441      | 8 324      | 9 500      | 10 954     |
| Total payments in financial year ending 30 June(a) | \$'000 | 11 734 222 | 11 884 066 | 12 383 929 | 13 204 658 |

(a) Includes allowances, Rent Assistance, and Wife Pension (age) and Carer Pension (age) where applicable.

Source: Department of Social Security.

## 7.6 DISABILITY SUPPORT PENSIONERS

|                                                     |        | June      |           |           |           |
|-----------------------------------------------------|--------|-----------|-----------|-----------|-----------|
|                                                     | Unit   | 1994      | 1995      | 1996      | 1997      |
| Age group (years)                                   |        |           |           |           |           |
| 16–19                                               | no.    | 9 402     | 10 295    | 11 039    | 12 313    |
| 20–39                                               | no.    | 98 549    | 105 889   | 113 450   | 119 990   |
| 40–59                                               | no.    | 234 355   | 254 258   | 277 901   | 298 530   |
| 60 and over                                         | no.    | 93 928    | 93 988    | 96 845    | 96 681    |
| Males                                               | no.    | 309 123   | 324 672   | 340 256   | 352 607   |
| Females                                             | no.    | 127 111   | 139 758   | 158 979   | 174 907   |
| Persons                                             | no.    | 436 234   | 464 430   | 499 235   | 527 514   |
| Wife pensioners (DSP)                               | no.    | 116 036   | 121 839   | 107 803   | 91 307    |
| Carer pensioners (DSP)                              | no.    | 9 450     | 10 633    | 13 483    | 15 735    |
| Total payments for financial year ending 30 June(a) | \$'000 | 4 337 862 | 4 524 754 | 4 917 412 | 5 299 148 |

(a) Includes allowances, Rent Assistance, and Wife Pension (DSP) and Carer Pension (DSP) where applicable.

Source: Department of Social Security.

### Carer Pension

Carer Pension is paid to people who are without other means of support because they are providing constant care or supervision to a person with a physical, intellectual or psychiatric disability or a person who is frail aged, either permanently or for an extended period (six months or more). The carer must personally provide this level of care or supervision in the private home of the care recipient, but is not required to live in or adjacent to the care recipient's home. The carer must be residentially qualified, with income and assets below the levels where qualification ceases under the pension income and assets tests. The rate of Carer Pension is the same as for other pensions.

From 1 July 1997, the name Carer Pension has been replaced by Carer Payment. Also from this time, increased provision has been made for carers to undertake voluntary work, education or training, and the time allowed for temporary breaks from caring has been increased.

See also the discussion under *Home and Community Care Program* below.

### Sickness Allowance

Sickness Allowance is paid to people over school leaving age but below Age Pension age who are temporarily unable to work or continue with their full-time studies due to illness or injury. To be eligible the person must have a job or study to which they can return. If they become temporarily incapacitated while unemployed, they receive Newstart Allowance (NSA) instead (as a result of changes implemented in March 1996). People on full pay sick leave do not qualify.

### Child Disability Allowance

Child Disability Allowance may be paid to a parent or guardian of a child under 16 years or a full-time student aged 16–21 who lives in the family home and, because of a physical, intellectual or psychiatric disability, requires substantially more care and attention than would a child of the same age who does not have a disability.

Child Disability Allowance is not taxable and is not subject to income or assets tests. The Allowance is not paid where the young person is receiving a social security payment in their own right.

### Payments for the unemployed

#### Newstart Allowance

Prior to September 1996 income support for unemployed adults consisted of two separate payments: Job Search Allowance (JSA) for those who had been unemployed for less than 12 months and NSA for those who had been unemployed for a year or more. From September 1996, JSA and NSA were amalgamated into a single payment called NSA. Table 7.7 shows the number of customers of NSA at June 1997.

To be eligible for NSA, a person must be unemployed and be capable and willing to undertake suitable paid work. NSA recipients must also be registered as unemployed with Centrelink (see *Centrelink* section below), must be taking reasonable steps to obtain work and must not be unemployed due to industrial action. Recipients of NSA must be permanent

residents of Australia. Eligibility is subject to income and assets tests.

Income support for the unemployed is linked to active job search and participation in labour market programs designed to encourage an early return to the workforce. Each fortnight Newstart allowees are required to complete a fortnightly income statement that requires them to list details of any income obtained from employment and provide details of their job search. They also may be required to enter into an activity agreement which provides for an agreed course of action designed to improve the recipient's job prospects.

### Youth Training Allowance

Youth Training Allowance (YTA) is paid to unemployed people under the age of 18 years. YTA recipients participate in the Youth Training Initiative (YTI) which seeks to ensure that young people do not become long-term unemployed. It provides access to entry level training, labour market program places and case management

through Centrelink, starting no later than 13 weeks after registration.

YTA is paid directly to young people at the three AUSTUDY basic rates of payment (at home, away from home, and independent/homeless). All rates are subject to income and assets tests. The at home and away from home rates are also subject to parental income and assets tests.

### Mature Age Allowance

From 1 July 1996, people granted Mature Age Allowance (MAA) are paid at pension rates, have access to the Pensioner Concession card and are subject to allowance income and assets tests. MAA is paid only to people who have been receiving income support and who have no recent workforce experience. Where people have formerly been receiving NSA they are required to have been receiving income support for nine months before they can qualify for MAA. Eligibility to MAA ensures ongoing income support free of activity testing for older men and women facing significant labour market disadvantage.

## 7.7 NEWSTART ALLOWANCE(a)

|                                                     |        |           |           |           | June      |
|-----------------------------------------------------|--------|-----------|-----------|-----------|-----------|
|                                                     | Unit   | 1994      | 1995      | 1996      | 1997      |
| <b>Short term (12 months or less)</b>               |        |           |           |           |           |
| Age group (years)                                   |        |           |           |           |           |
| 20 and under                                        | no.    | 113 578   | 86 261    | 78 535    | 62 975    |
| 21–34                                               | no.    | 180 886   | 180 135   | 216 818   | 181 147   |
| 35–54                                               | no.    | 104 148   | 102 076   | 132 935   | 118 903   |
| 55–59                                               | no.    | 16 690    | 14 574    | 18 507    | 17 185    |
| 60 and over                                         | no.    | 13 819    | 10 785    | 10 231    | 7 551     |
| Males                                               | no.    | 288 376   | 268 257   | 310 366   | 262 583   |
| Females                                             | no.    | 140 745   | 125 574   | 146 660   | 125 178   |
| Persons                                             | no.    | 429 121   | 393 831   | 457 026   | 387 761   |
| <b>Long term (over 12 months)</b>                   |        |           |           |           |           |
| Age group (years)                                   |        |           |           |           |           |
| 20 and under                                        | no.    | 49 164    | 42 545    | 37 153    | 40 985    |
| 21–34                                               | no.    | 187 233   | 164 836   | 140 955   | 163 140   |
| 35–54                                               | no.    | 200 112   | 139 316   | 125 022   | 146 861   |
| 55–59                                               | no.    | 28 601    | 29 194    | 27 025    | 29 451    |
| 60 and over                                         | no.    | 6 332     | 3 937     | 3 361     | 1 661     |
| Males                                               | no.    | 311 881   | 279 936   | 240 907   | 272 592   |
| Females                                             | no.    | 107 596   | 99 892    | 92 609    | 109 506   |
| Persons                                             | no.    | 419 477   | 379 828   | 333 516   | 382 098   |
| Total payments for financial year ending 30 June(b) | \$'000 | 7 597 818 | 7 061 006 | 5 765 174 | 6 047 829 |

(a) Representing the midpoint of the June quarter. (b) Includes additional allowances where applicable. Partner Allowance is not included in 1996.

Source: Department of Social Security.

### 7.8 MATURE AGE ALLOWANCE

| State/Territory                                     | Unit   | 1994   | 1995    | 1996    | June 1997 |
|-----------------------------------------------------|--------|--------|---------|---------|-----------|
| New South Wales                                     | no.    | 9 420  | 13 244  | 15 293  | 19 838    |
| Victoria                                            | no.    | 7 192  | 10 664  | 12 606  | 16 731    |
| Queensland                                          | no.    | 4 179  | 6 543   | 7 814   | 10 571    |
| South Australia                                     | no.    | 2 980  | 3 796   | 4 542   | 5 854     |
| Western Australia                                   | no.    | 1 948  | 2 983   | 3 631   | 4 939     |
| Tasmania                                            | no.    | 1 068  | 1 482   | 1 749   | 2 213     |
| Northern Territory                                  | no.    | 100    | 147     | 179     | 240       |
| Australian Capital Territory                        | no.    | 101    | 167     | 223     | 351       |
| Australia                                           | no.    | 27 528 | 39 026  | 46 037  | 60 737    |
| Total payments for financial year ending 30 June(a) | \$'000 | 77 555 | 356 551 | 436 551 | 472 469   |

(a) Includes expenditure for Mature Age Partner Allowance.

Source: Department of Social Security.

Table 7.8 shows the number of customers of the MAA by State/Territory.

#### Partner Allowance

Prior to the introduction of Partner Allowance, allowees with a partner received a married rate of allowance which included an amount for the support of a dependent spouse. This married rate of payment was abolished, and Partner Allowance (at half the married rate) was paid directly to the dependent partner.

Since 1 July 1995, Partner Allowance is payable to partners of persons in receipt of NSA, Sickness Allowance, Special Benefit, Rehabilitation Allowance, Age Pension, Disability Support Pension, Disability Wage Supplement, MAA or the Department of Veterans' Affairs Service Pension. From this time the payment has been limited to persons born on or before 1 July 1955, who have no dependent children and who have no recent workforce experience. Partner Allowance is a non-activity tested payment subject to the income and assets test; partners who do not qualify for Partner Allowance need to qualify for another payment such as Parenting or NSA.

#### Payment for families with children

##### Family Payment

Family Payment is payable for dependent children under 16 years and dependent full-time students aged 16–18 years who are not eligible for a Prescribed Education Scheme payment such as AUSTUDY.

Family Payment comprises a minimum rate of payment available to most families with children and a higher rate of payment provided to low income families. Families on income support automatically receive the maximum rate of Family Payment. The rate depends on the family's income and assets, the number and ages of children in the family, whether the family is renting privately and whether the parent is single.

An additional allowance, also subject to income and assets tests, is payable in respect of multiple (three or more) births until the children turn six years.

Payments are made to the primary carer of the children. Family Payment can also be paid to approved charitable, religious or government institutions for children in their care.

Table 7.9 shows the numbers of customers receiving Family Payment and the number of children for whom payment is made.

##### Family Tax Payment

The Family Tax Payment was introduced on 1 January 1997 and is part of the Government's Family Tax Initiative to provide additional assistance to families with children. The majority of eligible families receive assistance through the taxation system. However, low income families get an equivalent level of assistance in the form of a fortnightly cash payment — the Family Tax Payment, through the DSS.

**7.9 FAMILY PAYMENT**

|                                                  | Unit   | June 1994 | June 1995 | June 1996 | June 1997 |
|--------------------------------------------------|--------|-----------|-----------|-----------|-----------|
| Family Payment at the minimum rate               |        |           |           |           |           |
| Customers                                        | no.    | 985 967   | 967 528   | 928 523   | 893 207   |
| Children                                         | no.    | 1 855 949 | 1 814 944 | 1 738 323 | 1 669 930 |
| Family Payment above the minimum rate            |        |           |           |           |           |
| Customers                                        | no.    | 841 894   | 836 590   | 883 934   | 918 538   |
| Children                                         | no.    | 1 683 050 | 1 671 372 | 1 759 144 | 1 821 230 |
| Total on Family Payment                          |        |           |           |           |           |
| Customers                                        | no.    | 1 827 861 | 1 804 118 | 1 812 457 | 1 811 745 |
| Children                                         | no.    | 3 538 999 | 3 486 316 | 3 497 467 | 3 491 160 |
| Total payments for financial year ending 30 June | \$'000 | 5 450 938 | 5 551 644 | 5 877 685 | 6 284 731 |

Source: Department of Social Security.

**Sole Parent Pension**

To qualify for Sole Parent Pension, a person must:

- be caring for at least one dependent child who is under 16 years of age or who qualifies the person for child disability allowance;
- not be a member of a couple;
- satisfy the residency qualification; and
- have taken reasonable action to obtain child support, if appropriate.

A member of a couple may qualify for payment if the member's partner has been in gaol for at least 14 days or if the couple are unable to live together as a result of long-term illness or infirmity in one of the partners.

Sole Parent Pension is subject to income and assets tests with the maximum rate payable being identical to the Age Pension.

Table 7.10 shows the number of Sole Parent pensioners at 30 June, and total payments for the financial years ending 30 June 1994 to 1997.

**Jobs, Education and Training Program (JET)**

The JET Program is jointly administered by the Departments of Social Security; Employment,

Education, Training and Youth Affairs; and Health and Family Services. It aims to improve the financial circumstances of eligible DSS customers by aiding their entry or re-entry into the workforce. JET provides an integrated program of assistance in the form of individual counselling and support, and access to training, education, assistance with job search and child care. Participation in the JET program is voluntary.

The JET program is open to all sole parent, widow 'B' and carer pensioners, widow allowees, and recipients of Special Benefit who would be eligible for Sole Parent Pension except for residency requirements. Three groups of Sole Parent pensioners are especially encouraged to take advantage of JET assistance: teenage Sole Parent pensioners; those who have been on Sole Parent Pension for more than 12 months and whose youngest child is at least six years old; and those who will lose eligibility for the pension within two years due to their youngest child turning 16 years. The number of customers of the JET Program is shown in table 7.11.

JET participants who study full or part time in AUSTUDY-approved courses may receive the AUSTUDY Pensioner Education Supplement of \$60 per fortnight and an Education Entry Payment of \$200.

**7.10 SOLE PARENT PENSIONERS**

|                                                     | Unit   | June 1994 | June 1995 | June 1996 | June 1997 |
|-----------------------------------------------------|--------|-----------|-----------|-----------|-----------|
| Age group (years)                                   |        |           |           |           |           |
| Under 20                                            | no.    | 9 957     | 10 205    | 10 265    | 10 477    |
| 20–29                                               | no.    | 103 653   | 105 676   | 109 334   | 112 797   |
| 30–39                                               | no.    | 132 517   | 137 141   | 144 205   | 150 652   |
| 40–49                                               | no.    | 59 702    | 63 830    | 69 569    | 75 114    |
| 50–59                                               | no.    | 7 386     | 7 864     | 8 606     | 9 531     |
| 60 and over                                         | no.    | 222       | 225       | 311       | 322       |
| Males                                               | no.    | 18 897    | 19 913    | 21 964    | 23 920    |
| Females                                             | no.    | 294 540   | 305 028   | 320 326   | 334 973   |
| Persons                                             | no.    | 313 437   | 324 941   | 342 290   | 358 893   |
| Total payments for financial year ending 30 June(a) | \$'000 | 2 524 616 | 2 552 272 | 2 760 105 | 2 992 322 |

(a) Until January 1993 total expenditure included additional payments for children, Guardian Allowance and Rent Assistance. Since then, expenditure on these additional payments has been included with Family Payment expenditures.

Source: Department of Social Security.

**7.11 JOB, EDUCATION AND TRAINING PROGRAM**

|                                       | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|---------------------------------------|---------|---------|---------|---------|
| New customers entering JET program(a) | 52 719  | 47 962  | 50 970  | 50 146  |
| JET customers undertaking education   | 14 537  | 13 976  | 13 143  | 13 453  |
| Jobs taken up by JET customers        | 17 563  | 19 475  | 19 344  | 22 668  |

(a) New customers include Sole Parent pensioners, Widow Class B Pensioners, Widow Allowees, Carer Pensioners and certain Sole Parent Special Beneficiaries.

Source: Department of Social Security.

**Child Support Scheme**

The DSS, the Child Support Agency (housed in the Australian Taxation Office) and the Attorney-General's Department jointly administer the Child Support Scheme.

The child's custodian can apply to the Child Support Agency which will assess the amount of child support payable using a formula set out in legislation.

The Agency can collect child support from liable parents and these payments are distributed to custodians by the DSS.

Alternatively, custodians can collect child support privately, provided that, where the custodian receives more than minimum rate of Family Payment from the DSS, it is at least the amount payable under the formula or court order. (Prior to 1 January 1993, DSS clients were required to have child maintenance payable under court orders or agreements collected by the Agency.)

The largest Family Payment subgroup (receiving more than the minimum rate) are Sole Parent pensioners. At June 1997, 42.3% of Sole Parent pensioners were declaring child support,

compared with 26% at the beginning of the Scheme in 1988. The number of Sole Parent pensioners declaring child support has more than doubled, from 61,129 at January 1988 to 148,700 at June 1997.

**Parenting Allowance**

Parenting Allowance, which incorporates the former Home Child Care Allowance, was introduced from 1 July 1995 as a payment for partners of income support recipients (both allowees and pensioners), partners of low income earners and those with low personal income. To qualify for Parenting Allowance, a person must be a member of a couple, allowed to live in Australia permanently, and must have a dependent child under the age of 16 years.

The allowance has two parts:

- Non-benefit Parenting Allowance which is non-taxable, income tested on the income of the claimant only and not assets tested.
- Benefit Parenting Allowance which is taxable, income tested on the income of both the claimant and the partner and assets tested.

The maximum rate of Parenting Allowance is the same as the married rate of other allowances.

## 7.12 PARENTING ALLOWANCE

|                                 | Unit   | June 1996 | June 1997 |
|---------------------------------|--------|-----------|-----------|
| Non-benefit Parenting Allowance | no.    | 422 604   | 425 378   |
| Benefit Parenting Allowance     | no.    | 237 743   | 239 488   |
| Total                           | no.    | 660 347   | 664 866   |
| Total expenditure(a)            | \$'000 | 2 019 321 | 2 216 628 |

(a) For financial year ending 30 June.

Source: Department of Social Security.

Table 7.12 shows, at June 1996 and 1997, the number of recipients of the Non-benefit and the Benefit Parenting Allowance, and total expenditure on each allowance.

### Maternity Allowance

Maternity Allowance was introduced from 1 February 1996. This payment assists families with the costs associated with a new baby (including forgone income as a result of the mother being unable to participate in the paid workforce around the time of the birth of the child). Maternity Allowance is a non-taxable, lump sum payment for each new child to families who meet the Family Payment residence, income and assets tests. It is equal to six times the weekly maximum rate of Parenting Allowance.

From 1 January 1998 Maternity Allowance has been paid in two stages as part of the initiative to boost immunisation rates. A lump sum of \$750 is paid within 13 weeks of the birth of the child and an additional amount of \$200 after the child reaches 18 months upon proof of age-specific immunisation. Families are not disadvantaged in cases where children are not immunised for medical reasons or where parents conscientiously object to immunisation.

### Other payments

#### Special Benefit

Special Benefit may be granted to people not qualified for any other payment but who are unable to earn a sufficient livelihood for themselves and their dependants and are in hardship. The rate at which Special Benefit is payable is discretionary, but cannot exceed the applicable NSA rate. Payment of Special Benefit is subject to an income test, an assets test and available funds test. The assets test is identical to that applying to NSA customers, but both the income test and the available funds test are specific to Special Benefit.

### International agreements and payment of pensions abroad

Under Australia's social security law, pensions for old age, severe disability and widowhood can usually be paid abroad permanently. Pensions for some other contingencies can be paid outside Australia for periods of up to 12 months, except in New Zealand where the recipient will normally have to apply to the New Zealand Government for a payment.

As at June 1997, Australia was paying more than 50,000 pensions to residents and former residents who were absent from Australia for more than 12 months. Other countries' social security systems were making about 275,000 similar payments to Australian pensioners.

Australia has social security agreements with Austria, Canada, Cyprus, Ireland, Italy, Malta, New Zealand, Portugal, Spain, the Netherlands, and the United Kingdom. The agreements form part of Australia's social security law. They enhance people's access to social security benefits from the agreement partners and guarantee the payment of those benefits when people move between countries. Australia negotiates social security agreements based on a principle of shared responsibility so that countries in which individuals may have lived and worked contribute towards social security payments for those individuals. Agreements can also contain provisions to regulate the exemption from pension contributions (superannuation contribution in Australia) for non-resident employees and their employers.

Negotiations to extend Australia's agreement network are under way with Chile, Denmark, Norway, Finland, Germany, Greece, Switzerland, Slovenia and Turkey.

### Rent Assistance

Rent Assistance (RA) is a non-taxable income supplement paid to Commonwealth income support recipients and low income families who rent in the private market. The aim of RA is to



improve housing affordability for people in these groups who face additional costs through paying private rent. The RA program is administered and funded by the Commonwealth through the social security system.

RA is payable to eligible clients of the DSS, the Department of Veterans' Affairs and the Department of Employment, Education, Training and Youth Affairs who rent accommodation in the private rental market and pay rent above minimum threshold levels. Assistance is provided at the rate of 75 cents per dollar of rent paid above these thresholds up to specific maximum rates of assistance. For rents above the level at which the maximum rate is payable, a person pays 100% of additional rent costs. The maximum rates and thresholds vary according to household size and structure.

### Centrelink

Centrelink is a statutory agency working in partnership with government departments to provide their services to the Australian public. Through its Board, Centrelink is accountable to the Minister for Social Security and the Commonwealth Parliament. The agency came into existence on 1 July 1997 and was officially launched on 24 September 1997. Centrelink provides various services on behalf of its clients. These clients include the Departments of Social Security; Health and Family Services; Employment, Education, Training and Youth Affairs; the Commonwealth Employment Service; and some assistance previously available from the Department of Primary Industries and Energy.

Centrelink is an Australia-wide organisation which reaches out to the remotest areas of the country and to people who have difficulty dealing with bureaucracy. This is carried out through an extensive national network of Customer Service Centres which provide:

- all services formerly provided by the DSS, as well as childcare and student assistance payments and services;
  - registration and acceptance of all new applicants for income support and employment assistance;
  - self-help job search facilities, including computer access to a national job vacancies database;
  - referrals for employment assistance; and
  - specialist labour market assistance services for disadvantaged groups.
- Centrelink also offers customers personalised assistance through various specialist services. These include:
- social workers who are available from all Customer Service Centres. They provide assistance to customers with financial, personal or family problems and refer them to relevant community support services;
  - the Financial Information Service (FIS), which gives free information to help current and future customers to improve their standard of living by using their own money to the best advantage. FIS Officers are available from most Customer Service Centres;
  - a number of services to ensure access to Centrelink by people from diverse cultural and linguistic backgrounds. These services include:
    - the Multilingual Telephone Information service, assistance from Migrant Liaison Officers, and translation and interpreting assistance;
    - a variety of services for Aboriginal and Torres Strait Islander peoples such as help from Aboriginal and Torres Strait Islander Officers, Remote Visiting Teams, a support network for Aboriginal and Torres Strait Islander parents, a Community Agent Program and an interpreter service; and
    - assistance to help young people to access educational, labour market, job search, housing, health and general welfare assistance available through government programs and services. This assistance is managed by specialist case management.
- Centrelink aims to continually improve by keeping abreast of and using latest on-line facilities and improved face-to-face, mobile, call centre and interactive services.



## Community support programs of the Department of Health and Family Services

### Family and children's services

#### Children's Services Program

The objective of the Children's Services Program is to assist families with dependent children to participate in the workforce and the general community by supporting the provision of affordable, quality child care. Assistance is available under the Program to improve the choice, affordability, supply and quality of child care. These aims are being achieved as follows.

The number of funded child care places increased from 306,500 in June 1996 to 331,200 places in June 1997. These comprise 46,300 community Long Day Care places, 136,600 private Long Day Care places (including employer and non-profit centres), 62,700 Family Day Care places, 4,900 Occasional Care places, 1,700 Multifunctional Centre and Multifunctional Aboriginal Children's Service places and 79,000 Outside School Hours Care places. Table 7.13 shows the number of children attending child care services.

Of the 24,700 additional places funded in 1996–97, 17,400 were for long day care.

**7.13 CHILDREN ATTENDING CHILD CARE SERVICES, 30 June 1997**

| Type of formal care                            | No.            |
|------------------------------------------------|----------------|
| Long day care community based                  | 83 000         |
| Private centres                                | 213 100        |
| Employer and other non-profit centres          | 23 700         |
| Family day care                                | 105 900        |
| Occasional centres                             | 13 700         |
| Occasional care neighbourhood model            | 24 100         |
| Multifunctional services                       | 1 100          |
| Multifunctional Aboriginal children's services | 1 800          |
| Mobile and toy libraries                       | 4 200          |
| Outside school hours care                      | 125 800        |
| <b>Total(a)</b>                                | <b>596 400</b> |

(a) Total is indicative only as children who attend more than one service type are counted in each.

Source: Estimated to June 1997 based on the 1994 and 1995 Census of Child Care Services by the Department of Health and Family Services.

The Commonwealth Government assists low and middle income families to meet their child care costs through an income-related Childcare Assistance system. Childcare Assistance is a targeted payment to low to middle income families using approved private and community-based services. The income level below which families receive maximum Childcare Assistance is linked to the income level below which families receive more than the minimum level of Family Payment, and is indexed annually.

At June 1997, 270,000 low and middle income families using long day care services received assistance with their child care costs through the Childcare Assistance system. Of these families 42% receive maximum Childcare Assistance.

A Childcare Cash Rebate is also available for work-related child care expenses up to a current ceiling of \$115 per week for one child and \$230 per week for two or more children. At 30 June 1997 there were over 437,000 families and over 57,000 child care providers registered for the Commonwealth Childcare Cash Rebate.

To improve convenience for families, from 1 January 1998 Childcare Assistance and Childcare Rebate will be paid by Centrelink (see earlier section). Parents will only have to deal with one agency to claim their entitlements instead of dealing with the DSS for Childcare Assistance assessments and the Health Insurance Commission (through Medicare offices) for the Childcare Rebate.

From January 1998 until January 1999, Childcare Assistance payments will be made fortnightly in advance to services based on families' entitlements. From 1999, Childcare Assistance will be paid in arrears to parents through a Childcare Card, which may be used to pay for care provided in Commonwealth approved child care services.

The Childcare Rebate will be paid in arrears, directly to families' bank accounts, from January 1998 onwards.

At 30 June 1997, all 4,086 long day care centres eligible to receive Childcare Assistance were participating in the Quality Improvement and Accreditation System (QIAS). In addition, 45 Multifunctional services (including 33 Multifunctional Aboriginal Children's Services) were participating, bringing the total to 4,134 services. Of these, 68% had achieved the standards set down for accreditation and the

remainder were progressing through the quality improvement process.

QIAS, administered by the National Childcare Accreditation Council, is underpinned by 52 principles of good quality child care practice. Accreditation decisions are made by the Council on the basis of a self-assessment by the centre of its standard of care in relation to these principles, an external review to validate the self-assessment, and moderation of the results to ensure national consistency.

The Government addresses access for children with additional needs through funding of Special Services and Supplementary Services (SUPS). The SUPS program was set up to assist all Commonwealth-funded children's services to include children with additional needs and provide culturally and developmentally appropriate care. The priority groups for the program are children from culturally diverse backgrounds, children with a disability, and children from an Aboriginal or Torres Strait Islander background. In the 1996–97 Budget (August 1996), the Government provided an additional \$10 million per year, from 1 July 1997,

for a new scheme called the Special Needs Subsidy Scheme, to enable children with high levels of additional needs, particularly children with disabilities, to access appropriate care in mainstream child care services. This funding is targeted at children who would not otherwise be able to participate in child care programs.

Special Services funding supports alternatives to mainstream services for special needs groups in areas where services are inappropriate or non-existent. Many of these services are targeted at children from an Aboriginal or Torres Strait Islander background and children living in rural and remote areas.

In the 1997–98 Budget (August 1997), the Children's Services Program included funding to provide child care for recipients of unemployment benefits participating in the Commonwealth Government's Work for the Dole pilot initiative. The existing support network, which has been established to assist mainly parents under the JET Program, will be used to make the child care arrangements for Work for the Dole participants.

## Patterns of child care use

The ABS Child Care Survey conducted in March 1996 showed that almost half (48%) of the children in Australia under 12 years used some form of child care (see table 7.14). Of those children who used child care, 40% used formal care. Use of formal care has steadily increased since 1987. In 1996, 20% of children under 12 years used formal care.

In the table, child care refers to arrangements made for the care of children under 12 years of age, excluding care which is provided by custodial parent(s). Formal child care is regulated care which takes place away from the child's home and includes attendance at preschool, a child care centre, family day care and occasional care (short periods of care generally available to children under five, which allow parents to shop, attend appointments etc.). Informal care is non-regulated and can take place in the child's home or elsewhere. It is most commonly provided by relatives (including a non-custodial parent) of the child, but also

includes care by friends, neighbours and paid baby sitters.

As well as seeking information on the types of child care being accessed, the ABS Child Care Survey in March 1996 asked parents to indicate whether their requirements for formal child care were being met. In some cases, parents reported a requirement for formal child care, while in others the children were already accessing formal care but required more. In 1996, around 8% of children (261,700) under 12 years of age required formal care which they were not receiving (see table 7.15). Before and after school care was reported as the main type required by about one-third (32%) of these children. Occasional or irregular care accounted for a further 31% of care required for children under 12 years of age. These two categories combined have accounted for over half of the formal care requirements since 1990.

**7.14 CHILD CARE ARRANGEMENTS**

| Type of care used                                  | June 1987      |              | November 1990  |              | June 1993      |              | March 1996     |              |
|----------------------------------------------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                                                    | '000           | %            | '000           | %            | '000           | %            | '000           | %            |
| Type of care(a)                                    |                |              |                |              |                |              |                |              |
| Formal care only                                   | 264.0          | 9.1          | 278.0          | 9.3          | 338.7          | 11.0         | 373.5          | 12.0         |
| Informal care only                                 | 915.1          | 31.7         | 1 018.1        | 33.9         | 908.7          | 29.4         | 877.5          | 28.3         |
| Formal and informal care                           | 191.3          | 6.6          | 252.5          | 8.4          | 257.5          | 8.3          | 250.9          | 8.1          |
| Total who used care                                | 1 370.3        | 47.4         | 1 548.5        | 51.6         | 1 504.9        | 48.8         | 1 501.8        | 48.4         |
| Total formal care                                  | 455.2          | 15.7         | 530.4          | 17.7         | 596.2          | 19.3         | 624.4          | 20.1         |
| Total informal care                                | 1 106.4        | 38.3         | 1 270.5        | 42.3         | 1 166.2        | 37.8         | 1 128.3        | 36.4         |
| Children who used neither formal nor informal care | 1 517.6        | 52.5         | 1 455.2        | 48.4         | 1 581.0        | 51.2         | 1 601.0        | 51.6         |
| <b>Total children</b>                              | <b>2 887.9</b> | <b>100.0</b> | <b>3 003.7</b> | <b>100.0</b> | <b>3 085.9</b> | <b>100.0</b> | <b>3 102.8</b> | <b>100.0</b> |

(a) Components do not add to total as children could use more than one type of care.

Source: Child Care, Australia (4402.0).

**7.15 MAIN TYPE OF (ADDITIONAL) FORMAL CARE REQUIRED**

| Main type of care required(a)        | November 1990 |              | June 1993    |              | March 1996   |              |
|--------------------------------------|---------------|--------------|--------------|--------------|--------------|--------------|
|                                      | '000          | %            | '000         | %            | '000         | %            |
| Before and after school care program | 128.8         | 25.1         | 125.1        | 25.6         | 84.9         | 32.4         |
| Long day care centre                 | 89.3          | 17.4         | 63.8         | 13.0         | 39.0         | 14.9         |
| Family day care                      | 75.7          | 14.7         | 60.2         | 12.3         | 29.0         | 11.1         |
| Occasional care(b)(c)                | —             | —            | 191.8        | 39.2         | 82.1         | 31.4         |
| Preschool                            | 54.3          | 10.6         | 30.0         | 6.1          | 20.3         | 7.8          |
| Other formal care(c)                 | 166.0         | 32.3         | 18.3         | 3.7          | 6.4          | 2.4          |
| <b>Total</b>                         | <b>514.1</b>  | <b>100.0</b> | <b>489.2</b> | <b>100.0</b> | <b>261.7</b> | <b>100.0</b> |

(a) Includes some children already accessing formal child care. (b) Includes irregular care required for children under 12 years of age. (c) Occasional care was not separately identified in the 1990 Child Care Survey. It was included in 'Other formal care'.

Source: Child Care, Australia (4402.0).

**Family Services Program**

The objective of the Family Services Program is to improve the quality of life for families and people in crisis and to expand the choices for families and children at home, at work and in the general community. A range of services are funded under the Family Services Program.

The Supported Accommodation Assistance Program is a joint Commonwealth, States and Territories program assisting homeless people. Funds are provided to community-based and some local government organisations to provide a range of transitional supported accommodation and related support services to assist people who are homeless or at imminent

risk of homelessness, and in crisis, to achieve greater independence. National funding for this program for 1997–98 is \$226 million.

Over \$8 million has also been provided to fund 26 pilot projects across Australia under the Youth Homelessness Pilot Program. Pilot projects will test innovative early intervention strategies to assist young people at risk of homelessness to re-engage in family, work, education, training and life in the community. The emphasis is on identifying early home leaving, and developing approaches to family relations which will support young people and their families in the reconciliation process.

Evaluation of the pilots and their outcomes in late 1998 will assist the work of the Prime Ministerial Youth Homeless Taskforce in developing appropriate advice to the Government on improving Australia's response to youth homelessness.

The Emergency Relief Program, funded by the Commonwealth Government, is administered by a variety of community, welfare and religious organisations. Funds are distributed to some 1,200 outlets and agencies to assist people in financial crisis. Funding for 1996–97 was over \$23 million.

The Commonwealth Budget also provided \$4.3 million over the years 1996–97 and 1997–98 for child abuse prevention initiatives focusing on parenting education. These funds have been provided to:

- test the development of a national network of 'Good Beginnings' pilot home visiting projects focusing on child abuse prevention and parenting education;
- a grants program for best practice initiatives in parenting education;
- research in the field of child abuse prevention and parenting education; and
- the establishment of a community-based advisory council.

## **Aged care services**

### **Residential aged care programs**

The aim of the Commonwealth Government's residential aged care program is to enhance the quality of life of older Australians through support for the provision of a cohesive framework of high quality and cost effective care services for frail older people.

The DHFS advertises for organisations to provide care in particular geographical areas and for special needs groups.

Recurrent funding is available for each person in a residential care setting. The funding depends on care needs of the resident.

Each organisation providing care needs to meet specific care standards and, from the beginning of 1998, it will need to be accredited by the

proposed Aged Care Standards Agency. Other funding conditions also apply.

Table 7.16 shows Commonwealth expenditure on nursing homes and hostels in 1996–97, and table 7.17 shows the number of beds and places in nursing homes and hostels.

### **Community Aged Care Packages**

Community Aged Care Packages provide personal care services for people in the community with complex needs who would otherwise require entry to long-term residential care. All prospective recipients must be assessed as eligible for services by Aged Care Assessment Teams. Service providers use a case management approach to develop and monitor care delivery to the older person.

In 1996–97, 6,077 places were available under the Community Aged Care Packages Program, with provision for continuing growth in later years. Recurrent expenditure in 1996–97 was \$51.3m.

In addition to general Community Aged Care Packages in 1996–97, the Commonwealth provided funding for 750 Housing Linked Care Packages which target clients in secure rental accommodation.

### **Aged Care Assessment Program**

The Aged Care Assessment Program (ACAP) is a joint Commonwealth-State program introduced in 1986. The aim of ACAP is to ensure that frail aged people have access to available residential care and community care services appropriate to their needs, through the operation of multidisciplinary Aged Care Assessment Teams (ACAT).

Throughout Australia a network of 121 ACATs operates according to Commonwealth guidelines. In addition, each State has an evaluation unit which monitors and evaluates the performance of the program. The Commonwealth provides grant funding to State health authorities which manage the program on a day-to-day basis. The State health authorities also contribute additional resources to the operation of ACATs and evaluation units. The Commonwealth Government contributed \$36m to this program in 1996–97.

**7.16 COMMONWEALTH EXPENDITURE ON NURSING HOMES AND HOSTELS, 1996–97**

|                                     | NSW   | Vic.  | Qld   | SA    | WA    | Tas. | ACT  | NT  | Aust.   |
|-------------------------------------|-------|-------|-------|-------|-------|------|------|-----|---------|
|                                     | \$m   | \$m   | \$m   | \$m   | \$m   | \$m  | \$m  | \$m | \$m     |
| Nursing homes for aged (recurrent)  | 886.0 | 520.4 | 313.4 | 197.7 | 163.8 | 67.5 | 15.6 | 6.5 | 2 170.9 |
| Hostels (recurrent)                 | 152.4 | 114.7 | 99.4  | 51.1  | 42.1  | 12.0 | 5.1  | 1.3 | 478.1   |
| Nursing homes and hostels (capital) | 24.9  | 39.2  | 10.5  | 10.5  | 6.4   | 3.6  | 2.4  | 1.7 | 99.2    |

Source: Department of Health and Family Services.

**7.17 NURSING HOMES AND HOSTELS, Beds and Places — 30 June 1997**

|                            | NSW    | Vic.   | Qld    | SA    | WA    | Tas.  | NT  | ACT | Aust.  |
|----------------------------|--------|--------|--------|-------|-------|-------|-----|-----|--------|
|                            | no.    | no.    | no.    | no.   | no.   | no.   | no. | no. | no.    |
| Nursing homes              | 438    | 453    | 217    | 160   | 113   | 61    | 7   | 6   | 1 494  |
| Approved nursing home beds | 28 946 | 17 339 | 12 324 | 6 956 | 5 833 | 2 172 | 210 | 519 | 73 780 |
| Hostels                    | 466    | 379    | 273    | 156   | 175   | 49    | 7   | 15  | 1 505  |
| Approved hostel places     | 20 124 | 16 223 | 12 812 | 6 490 | 5 874 | 1 589 | 145 | 829 | 63 257 |

Source: Department of Health and Family Services.

ACATs operate on a regional basis and their structure is influenced by the requirements of the community in which they function. All people over the age of 70 now have access to a regional ACAT. The Teams' responsibilities include holistic assessment of clients, approval of clients to receive residential aged care or Community Aged Care Packages, appropriate referral to other community services, and further assistance for older people through advice about aged care services in general. ACATs are also well positioned to act as an interface between aged care services and the health care system.

The Commonwealth funds pilot projects under the Aged Care Assessment Program in areas such as transition care for people recovering from acute illness or accident, as well as provision of psychogeriatric services. A number of ACATs are funded by the Commonwealth either as budget holders to deliver these pilot projects or to work closely with project managers to provide these services to their clients.

**Assistance with Care and Housing for the Aged Program (ACHA)**

The ACHA Program was established in the 1993–94 Budget to trial different approaches to more effectively link housing to care. There are 46 projects now operating across Australia. They employ support workers to help in direct service delivery or to link clients to appropriate mainstream housing and care services.

An evaluation will assess the program's effectiveness and identify the most successful

service models. Initial feedback indicates that clients are receiving better access to appropriate housing and are being helped to access mainstream health and care services.

**Disability services****People with a disability**

The *Disability Services Act 1986* was introduced to expand opportunities for the participation of people with disabilities in the Australian community. Under the Act, the Commonwealth Government provides grants for the provision of services to support people with disabilities, particularly in the labour market.

Until 1993 the Commonwealth, States and Territories were each involved in providing accommodation and support services and employment services for people with disabilities. The Commonwealth/State Disability Agreement (CSDA) was introduced to clarify government responsibilities and rationalise the provision of services for people with disabilities. All States and Territories had implemented the CSDA and passed legislation complementary to the Commonwealth Disability Services Act by 1993. This Agreement expired on 31 August 1997 and will be followed by interim arrangements until a longer term agreement is negotiated.

The Commonwealth is responsible for the administration of employment programs for people with a disability, while State and Territory Governments administer accommodation and other support services. Both levels of

government fund advocacy services and support research and development activities.

The aim of the Disability Services Program is to foster the development of environments and supports that promote participation and choice in work and community life for people with a disability.

Disability employment assistance takes account of the differing circumstances, needs, aspirations and abilities of each person with a disability. Specialist job placement agencies and support employment services provide individualised on-the-job training and support until the person is able to continue in the job independently.

The Commonwealth Government is exploring options for improving the delivery of specialised employment assistance for people with disabilities. Some of the proposals being considered include improved referral processes and better targeting of assistance through the introduction of nationally consistent assessment arrangements, and revised funding arrangements to better match funding to the needs of the individuals being assisted.

In 1994 the Commonwealth Disability Strategy was adopted as a ten-year policy and planning framework for Commonwealth government departments and authorities to improve access to their programs, services and facilities for people with disabilities.

The Strategy was adopted in response to the Commonwealth *Disability Discrimination Act 1992* which makes discrimination on the grounds of disability unlawful in relation to employment, education, accommodation, transport and the provision of goods and services.

In 1997–98 the Strategy is being evaluated taking into account government policy objectives and the structural and functional changes that have occurred in the management of many portfolios.

### The Home and Community Care Program

The Home and Community Care Program (HACC) is jointly funded by the Commonwealth Government and the State and Territory Governments. HACC funds organisations and community groups which provide basic maintenance and support services for the frail aged and people with disabilities to enable them

to remain living at home. Support is also provided to the carers of these people.

The program aims to enhance the independence, security and quality of life of frail aged and younger people with disabilities by avoiding their inappropriate admission to long-term residential care. It achieves this by facilitating and promoting the development of cost-effective community care alternatives which are appropriate and which can respond flexibly to individual needs.

Services funded under the program include home help and personal care, home maintenance and modification, food services, transport services, community paramedical services, community nursing, assessment and referral, education and training for service providers and users, information and coordination.

Expenditure by the Commonwealth and the States and Territories under the HACC Program is shown in table 7.18. Over 3,300 projects are funded throughout Australia.

**7.18 HOME AND COMMUNITY CARE EXPENDITURE(a)**

|         | Commonwealth | States and Territories | Total |
|---------|--------------|------------------------|-------|
| Year    | \$m          | \$m                    | \$m   |
| 1989–90 | 242.1        | 165.8                  | 407.9 |
| 1990–91 | 278.9        | 188.2                  | 467.1 |
| 1991–92 | 315.8        | 205.7                  | 521.5 |
| 1992–93 | 342.2        | 222.7                  | 564.9 |
| 1993–94 | 371.0        | 240.8                  | 611.8 |
| 1994–95 | 399.0        | 258.8                  | 657.8 |
| 1995–96 | 423.6        | 274.5                  | 698.1 |
| 1996–97 | 451.6        | 292.4                  | 744.0 |

(a) Includes planning and development funds but excludes running costs.

Source: Department of Health and Family Services.

In addition to the range of mainstream services provided in 1996–97, the HACC Program provided funding for specific projects for special needs groups such as Aboriginal and Torres Strait Islander people (\$14.8m), people from non-English speaking backgrounds (\$14.2m), carers (\$11.4m), and people with dementia (\$13.0m).



## People with an unmet need for help because of age or disability

It is important to identify the potential population who need support to remain in their own homes. The ABS Disability, Ageing and Carers Survey in 1993 showed that there were 1,826,300 people who required assistance with common daily activities because of age or disability (see table 7.19). In some cases the assistance received for these activities was enough to allow a person to live a relatively independent lifestyle in their own home, when they might otherwise have needed residential care. For others the receipt of help was less critical and would not directly affect their independence, but would have a positive impact on their daily life. A large proportion of those requiring help had a handicap (77%), while others needed help because of their age. Not everyone received as much help as they felt they needed.

People with a disability were considered to have a handicap if they had a limitation in performing certain tasks in one or more of the areas of self-care, mobility, verbal communication, schooling and employment. Four levels of severity of handicap were identified — profound, severe, moderate and mild. Those with profound or severe levels of handicap needed personal help with at least one activity in the areas of self-care, mobility or communication.

The majority of people who required help received some help, but not always as much as they would have liked. Of all those who required assistance because of age or disability, almost one-third (31%) reported a need for more assistance than they received with at least one activity. The likelihood of needing more help than was received, increased with the presence of a disability and the severity of handicap. For example more than one in three of those with a severe or profound handicap said they needed more help, compared with about one in six for those who needed assistance because of age only.

People in need of help (because of age or disability) required assistance with activities such as home help, home maintenance/gardening and meal preparation. Over one million people reported a need for help with home maintenance/gardening and about 22% felt they needed more help than they received with this. Of the 706,800 who required home help (i.e. assistance with washing, vacuuming, cleaning), around 27% would have liked more help.

Sometimes people who said they would like additional help did not seek this help. In other cases, help was sought but was not always available, either from informal sources such as family or friends or from formal sources such as organisations. Around 52% of those who needed more help than they were receiving with home maintenance/gardening reported that they did not receive additional help because their family and friends were too busy or unable to provide more help (see table 7.20). A further 30% had not asked their family or friends, possibly because they preferred to remain independent.

The reasons for a lack of formal help differed depending on the activity in question. Some did not consider their need important enough for formal help while others were unable to arrange any. More than half of those who needed more help with self-care (showering, dressing, eating etc.) chose not to seek formal help because they would rather manage without help or because they did not consider their need important enough. Home maintenance was clearly an area where people would have liked to have arranged formal help for themselves, but were unable to for some reason. Of those who wanted more help in this area, 46% reported that the main reason they lacked formal help was because there was no service available (or they did not know of one), or they had been unable to arrange such a service.

### 7.19 PEOPLE LIVING IN A HOUSEHOLD WHO REQUIRE ASSISTANCE BECAUSE OF AGE OR DISABILITY, 1993

| Level of handicap                     | Selected tasks for which assistance is required because of age or disability(a) |              |              |                                  |              | Total needing help with any task(d) |
|---------------------------------------|---------------------------------------------------------------------------------|--------------|--------------|----------------------------------|--------------|-------------------------------------|
|                                       | Self-care(b)                                                                    | Mobility(b)  | Home help(c) | Home maintenance or gardening(c) | Transport(c) |                                     |
|                                       | '000                                                                            | '000         | '000         | '000                             | '000         | '000                                |
| Profound or severe handicap           |                                                                                 |              |              |                                  |              |                                     |
| More help needed                      | 42.0                                                                            | 88.7         | 63.7         | 78.6                             | 51.9         | 230.4                               |
| <i>Total needing help</i>             | 331.2                                                                           | 494.3        | 337.6        | 397.5                            | 372.5        | 597.3                               |
| Moderate/mild/not determined handicap |                                                                                 |              |              |                                  |              |                                     |
| More help needed                      | n.a.                                                                            | n.a.         | 103.4        | 131.6                            | 35.0         | 261.2                               |
| <i>Total needing help</i>             | n.a.                                                                            | n.a.         | 297.2        | 528.0                            | 310.3        | 814.2                               |
| Disability without handicap           |                                                                                 |              |              |                                  |              |                                     |
| More help needed                      | n.a.                                                                            | n.a.         | 4.4          | 11.2                             | 2.1          | 17.8                                |
| <i>Total needing help</i>             | n.a.                                                                            | n.a.         | 9.6          | 33.5                             | 25.4         | 68.4                                |
| Neither disability nor handicap(e)    |                                                                                 |              |              |                                  |              |                                     |
| More help needed                      | n.a.                                                                            | n.a.         | 21.8         | 36.2                             | 10.1         | 61.5                                |
| <i>Total needing help</i>             | n.a.                                                                            | n.a.         | 62.4         | 192.2                            | 203.8        | 346.5                               |
| <i>Total needing more help</i>        | 42.0                                                                            | 88.7         | 193.3        | 257.6                            | 99.1         | 570.9                               |
| <b>Total needing any help at all</b>  | <b>331.2</b>                                                                    | <b>494.3</b> | <b>706.8</b> | <b>1151.1</b>                    | <b>912.0</b> | <b>1826.3</b>                       |

(a) Assistance may be needed with more than one activity. (b) If assistance is needed with self-care or mobility a person is deemed to have a profound or severe handicap. (c) Assistance needed because of age or disability. (d) The sum of components may be greater than totals because people may need help with more than one activity. (e) People who need help because of age (60+ yrs).

Source: Survey of Disability, Ageing and Carers, 1993.

### 7.20 PEOPLE LIVING IN A HOUSEHOLD WHO HAVE AN UNMET NEED FOR ASSISTANCE(a), 1993

| Level of handicap                                                   | Selected tasks for which assistance is required because of age or disability(b) |             |              |                                  |              |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------|--------------|----------------------------------|--------------|
|                                                                     | Self-care(c)                                                                    | Mobility(c) | Home help(d) | Home maintenance or gardening(d) | Transport(d) |
|                                                                     | '000                                                                            | '000        | '000         | '000                             | '000         |
| Reason lacking informal help                                        |                                                                                 |             |              |                                  |              |
| Has not asked                                                       | 12.7                                                                            | 30.2        | 66.6         | 74.6                             | 30.4         |
| Felt family/friends were too busy/unable to help                    | 18.4                                                                            | 32.2        | 83.3         | 133.9                            | 44.7         |
| Other(e)                                                            | 11.0                                                                            | 26.3        | 43.3         | 49.0                             | 24.1         |
| Reason lacking formal help                                          |                                                                                 |             |              |                                  |              |
| Did not know of a service/no service available or unable to arrange | 9.3                                                                             | 26.3        | 60.8         | 117.7                            | 50.7         |
| Need not important enough                                           | 15.3                                                                            | 29.2        | 46.3         | 40.7                             | 21.7         |
| Will not ask/pride                                                  | 6.2                                                                             | 17.6        | 46.1         | 48.5                             | 15.2         |
| Other                                                               | 11.2                                                                            | 15.5        | 40.1         | 50.8                             | 11.6         |
| <b>Total with an unmet need for help</b>                            | <b>42.0</b>                                                                     | <b>88.7</b> | <b>193.3</b> | <b>257.6</b>                     | <b>99.1</b>  |

(a) Assistance must be needed because of age or disability. (b) Assistance may be needed with more than one activity. (c) Assistance needed because of disability only. (d) Assistance needed because of age or disability. (e) Includes 'no one to help'.

Source: Survey of Disability, Ageing and Carers, 1993.



## Support for carers of people with disabilities

The aim of carer support programs is to meet the needs of carers in three broadly defined areas: practical information, flexible respite services and financial assistance. Under the National Respite for Carers Program (NRCP), Carer Resource Centres provide a single point of contact for carers seeking advice and information about the services available to them. The needs of carers of people with dementia, carers from culturally diverse backgrounds, and Aboriginal and Torres Strait Islander carers are provided for through the provision of specifically designed information and support mechanisms.

Carer Respite Centres assist carers to access in-home, community and residential respite services, and coordinate packages of respite care assistance to meet individual needs. The NRCP, through the Commonwealth Respite for Carers Program, also directly funds respite services. NRCP expenditure in 1996–97 was \$18.9m.

The Domiciliary Nursing Care Benefit (DNCB) provides financial assistance to carers who live with, and provide care for, relatives or friends who have been assessed as needing the level of care provided in a nursing home. DNCB expenditure in 1996–97 was \$65m.

## Commonwealth Rehabilitation Service

The Commonwealth Rehabilitation Service (CRS) is a sub-agency within the Department of Health and Family Services and administers Part III of the Disability Services Act. The CRS is a direct government provider of vocational rehabilitation services for working age people with disabilities through a nation-wide network of some 150 sites. On a commercial basis, the CRS has operated, for a number of years, in the compensation insurance market providing vocational rehabilitation services, and has also provided a range of injury prevention services to employers.

CRS rehabilitation programs are individually tailored to meet client needs and reflect the desired outcomes of the purchaser of services. These programs may include career counselling and planning, information about disability and strategies on how to manage its effects, improvement of job seeking skills, training in specific skills, modification of the workplace as appropriate and, ultimately, assistance in job seeking and job placement.

Decisions were taken by the Government in the 1996–97 Budget (August 1996) to:

- open the vocational rehabilitation sector to competition from 1998–99;
- restructure the CRS to commercialise its operations; and
- provide greater separation of the CRS from the Department of Health and Family Services.

The overall policy objective is to improve efficiency and consumer choice through the introduction of contestability for government-funded work in the sector. The restructuring of CRS operations will see greater internal separation within the Department of Health and Family Services and the adoption of commercial disciplines in business planning within CRS. The long-term structure of the CRS will be considered in late 1997, in association with the overall reform of disability employment support programs.

In 1996–97, the CRS assisted 43,395 clients (12,930 of these in the compensable sector). Commonwealth expenditure for the CRS was some \$116m, with an additional \$30m raised through its commercial activities.

## Hearing Services Program

The role of the Hearing Services Program is the purchase of services for people with a hearing impairment. The administration of the Hearing Services Program is the responsibility of the Office of Hearing Services (OHS), a Branch within the Department of Health and Family Services.

OHS provides access to hearing services by eligible adults, who include holders of Pensioner Concession Cards, eligible veterans, Commonwealth Rehabilitation clients and Defence personnel. Services are purchased from Australian Hearing Services (a statutory authority in the Health and Family Services portfolio) and private providers.

Australian Hearing Services delivers services through a network of 57 full-time hearing centres and some 200 visiting centres in rural and remote areas. Over 120 private providers are accredited by OHS to provide services at about 190 permanent sites and over 600 visiting sites.

In addition, Australian Hearing Services provides specialised services to those under 21 years of age, people with complex needs, eligible

Aboriginal and Torres Strait Islander people and eligible people living in remote areas. It also conducts noise and audiological research, advises on measures to prevent hearing loss and reports on environmental and occupational noise problems.

## Services provided by the Department of Veterans' Affairs

Services to veterans are determined formally by the Repatriation Commission. The Department of Veterans' Affairs provides the administrative machinery through which the Commission operates. The Commission, comprising three full-time members, has functions which include:

- granting pensions, allowances and other benefits in accordance with the provisions of Repatriation legislation;
- arranging the provision of treatment and other services for eligible persons;
- advising the Minister, and providing the Minister with information on matters relating to Repatriation legislation;
- performing other functions conferred on the Commission by the Act or other Acts; and
- administering the Acts subject to the control of the Minister.

Repatriation benefits are provided under the *Veterans' Entitlements Act 1986* in respect of service with the Australian Defence Forces in World War I, World War II, Korean and Malayan operations, the Australian contingent of the British Commonwealth Far East Strategic reserve, in Vietnam and South East Asia, and for service in the Regular Defence Forces on or after 7 December 1972. Certain civilians may also be eligible for benefits, as are Australian members of certain designated peacekeeping, observing and monitoring forces who had peacekeeping service overseas and, from July 1994, Australian mariners of World War II. Under the *Papua New Guinea (Members of the Forces Benefits) Act 1957*, indigenous inhabitants of Papua New Guinea who served in the Australian forces in World War II, and members of the Royal Papuan Constabulary and New Guinea Police Force who served in that conflict, are eligible for compensatory-type benefits. Members of other Commonwealth countries' forces and other allied veterans are not eligible for compensatory-type benefits in respect of their

service, unless they were domiciled in Australia immediately before their enlistment. They may, however, qualify for income support payments such as the Service Pension.

Qualification for receiving subsidised housing loans, granted under the Defence Service Homes Act, generally depends on service with the Australian Defence Forces in World War I, World War II, or specified service in Korea, Malaya, South East Asia, Namibia, or the Middle East in respect of the Kuwaiti crisis, and for service in the Regular Defence forces on or after 7 December 1972 provided the person's first service in the Forces was before 15 May 1985. Certain civilians may also be eligible.

More detailed information on repatriation allowances, benefits and services is available from the Department.

## Compensation Program

The principal objective of the Compensation Program is to compensate veterans and their dependants for the effects of war or defence service. Compensation is administered under four sub-programs — the Compensation Sub-program, the Income Support Sub-program, the Housing Sub-program and the Veterans' Review Board.

### Compensation Sub-program

The main benefits provided under this sub-program are the Disability Pension and the War/Defence Widow's/Widower's Pension and ancillary benefits. Table 7.21 shows the number of pensions at 30 June 1995 to 1997.

The Disability Pension is a compensatory payment for incapacity due to eligible war, defence or peacekeeping service. Table 7.22 shows the number of disability pensioners at 30 June 1997. General rate Disability Pensions range from 10% up to and including 100%, depending on the degree of war-caused or defence-caused incapacity. Higher rates of pension (intermediate rate and special rate) are payable if:

- there is at least 70% incapacity due to war, defence-caused injury or disease; and
- the veteran is totally and permanently incapacitated from accepted disabilities alone; and
- the disabilities render him/her incapable of undertaking remunerative work for periods aggregating to more than 20 hours per week

for the intermediate rate, or eight hours for the special rate.

An Extreme Disablement Adjustment, equal to 150% of the general rate, is payable to severely disabled veterans who are 65 years of age or over.

The War/Defence Widow's/Widower's Pension is payable to the widow or widower of a veteran:

- whose death has been accepted as war-caused or defence-caused;
- who at the time of his or her death was receiving or entitled to receive a special rate Disability Pension or the Extreme Disablement Adjustment; or
- who at the time of his/her death was receiving a pension which had been increased due to certain amputations, or amputations and blindness.

From 1 January 1993, the War Widow's/Widower's Pension also became available to the widows/widowers of former prisoners of war.

Orphan's Pension is payable to the children of these veterans.

#### 7.21 DISABILITY AND WAR WIDOWS' PENSIONS, 30 June

| Recipient        | 1995           | 1996           | 1997           |
|------------------|----------------|----------------|----------------|
| Veterans         | 157 298        | 159 178        | 160 145        |
| Wives and widows | 79 656         | 74 725         | 69 858         |
| Children         | 6 181          | 5 176          | 4 547          |
| War widows       | 88 980         | 93 456         | 97 522         |
| Orphans          | 474            | 470            | 459            |
| Other dependants | 585            | 547            | 512            |
| <b>Total</b>     | <b>333 174</b> | <b>333 552</b> | <b>333 043</b> |

Source: Department of Veterans' Affairs.

#### 7.22 DISABILITY PENSIONERS, 30 June 1997

|                                  | World War I | World War II(a) | Korea        | Malay and FESR(b) | Special overseas service | Peacetime forces | Miscellaneous(c) | Total          |
|----------------------------------|-------------|-----------------|--------------|-------------------|--------------------------|------------------|------------------|----------------|
|                                  | no.         | no.             | no.          | no.               | no.                      | no.              | no.              | no.            |
| General rate — from 10 to 100%   | 40          | 94 177          | 3 431        | 623               | 10 068                   | 23 439           | 435              | 132 213        |
| Intermediate rate                | 0           | 612             | 33           | 2                 | 183                      | 167              | 2                | 999            |
| Special rate (TPI or equivalent) | 3           | 11 778          | 877          | 176               | 5 098                    | 2 674            | 19               | 20 625         |
| Extreme Disablement Adjustment   | 4           | 6 013           | 150          | 10                | 26                       | 49               | 56               | 6 308          |
| <b>Total</b>                     | <b>47</b>   | <b>112 580</b>  | <b>4 491</b> | <b>811</b>        | <b>15 375</b>            | <b>26 329</b>    | <b>512</b>       | <b>160 145</b> |

(a) Includes interim forces. (b) Far East Strategic Reserve. (c) Includes Gulf War.

Source: Department of Veterans' Affairs.

Table 7.23 shows the number of Disability Pensions in force at 30 June 1997 and the six preceding years.

The Veteran's Children Education scheme (see tables 7.24 and 7.25) provides financial help, guidance and counselling to certain students up

to 25 years of age. To be eligible a student must be the child of a veteran, an Australian mariner, or a member of the Forces, who is (or has been) in receipt of a Special Rate Disability Pension. Children of former prisoners of war, veterans, or Australian mariners whose death has been accepted as war caused, are also eligible.

### 7.23 DISABILITY AND WAR WIDOWS' PENSIONS, 30 June

|      | Incapacitated veterans | Dependants of<br>incapacitated veterans | Dependants of<br>deceased veterans | Total          | Annual expenditure(a) |
|------|------------------------|-----------------------------------------|------------------------------------|----------------|-----------------------|
|      | no.                    | no.                                     | no.                                | no.            | \$'000                |
| 1991 | 159 579                | 108 478                                 | 79 494                             | <b>347 551</b> | 1 340 420             |
| 1992 | 157 790                | 102 953                                 | 81 125                             | <b>341 868</b> | 1 396 192             |
| 1993 | 156 923                | 96 948                                  | 83 642                             | <b>337 513</b> | 1 445 308             |
| 1994 | 156 565                | 91 722                                  | 86 224                             | <b>334 511</b> | 1 508 446             |
| 1995 | 157 298                | 85 837                                  | 90 039                             | <b>333 174</b> | 1 570 136             |
| 1996 | 159 178                | 79 901                                  | 94 473                             | <b>333 552</b> | 1 720 239             |
| 1997 | 160 145                | 74 405                                  | 98 493                             | <b>333 043</b> | 1 819 338             |

(a) Includes associated allowances.

Source: Department of Veterans' Affairs.

### 7.24 VETERANS' CHILDREN EDUCATION SCHEME, Cost of Education Beneficiaries

|         | NSW(a)  | Vic.    | Qld     | SA(b)  | WA      | Tas.   | Aust.   |
|---------|---------|---------|---------|--------|---------|--------|---------|
|         | \$'000  | \$'000  | \$'000  | \$'000 | \$'000  | \$'000 | \$'000  |
| 1990-91 | 1 470.3 | 975.6   | 1 015.4 | 459.6  | 290.4   | 308.7  | 4 520.0 |
| 1991-92 | 1 475.8 | 1 068.2 | 1 201.6 | 542.5  | 289.6   | 358.8  | 4 936.5 |
| 1992-93 | 1 612.4 | 1 092.7 | 1 198.1 | 310.1  | 644.8   | 413.6  | 5 271.7 |
| 1993-94 | 1 749.3 | 1 170.2 | 1 303.8 | 348.5  | 771.6   | 463.5  | 5 806.9 |
| 1994-95 | 1 905.7 | 1 163.9 | 1 601.4 | 371.7  | 791.8   | 491.8  | 6 326.3 |
| 1995-96 | 2 401.2 | 1 399.4 | 1 877.8 | 432.8  | 925.4   | 553.1  | 7 589.7 |
| 1996-97 | 2 913.7 | 1 694.8 | 2 430.4 | 522.3  | 1 135.8 | 620.7  | 9 317.7 |

(a) Includes the Australian Capital Territory. (b) Includes the Northern Territory.

Source: Department of Veterans' Affairs.

### 7.25 VETERANS' CHILDREN EDUCATION SCHEME, Number Receiving Benefits — 30 June 1997

| Type of training      | NSW(a)       | Vic.       | Qld          | SA(b)      | WA         | Tas.       | Aust.        |
|-----------------------|--------------|------------|--------------|------------|------------|------------|--------------|
| At school             |              |            |              |            |            |            |              |
| Primary(c)            | 280          | 162        | 301          | 69         | 172        | 75         | 897          |
| Secondary             | 646          | 330        | 490          | 119        | 255        | 150        | 1 660        |
| Total at school       | 926          | 492        | 791          | 188        | 427        | 225        | 2 557        |
| Tertiary professional | 189          | 178        | 164          | 38         | 128        | 39         | 558          |
| Technical             | 75           | 0          | 61           | 18         | 0          | 7          | 161          |
| <b>Total</b>          | <b>1 190</b> | <b>670</b> | <b>1 016</b> | <b>244</b> | <b>555</b> | <b>271</b> | <b>3 276</b> |

(a) Includes the Australian Capital Territory. (b) Includes the Northern Territory. (c) Not in receipt of an education allowance.

Source: Department of Veterans' Affairs.

### Income Support Sub-program

The main form of income support paid under this sub-program is the Service Pension. This is an income and assets tested pension similar to the Age and Disability Support Pensions paid by the DSS. The pension is payable to veterans with qualifying service at age 60. Prior to 1 July 1995, the pension was payable to female veterans with qualifying service at age 55. The Government introduced changes to the minimum age at which a female veteran can be granted Service Pension (Age). The minimum age will be lifted from 55 to 60 years in six-monthly increments every two years over the period 1995–2013. This means that the qualifying age for Service Pension (Age) at 1 July 1997 was 56 years. The qualifying age on 1 July 2013 will be the same as for male veterans, that is, 60 years. Veterans with qualifying service may be paid the pension at any age if they are permanently incapacitated for work. Qualifying service generally means service in an area and at a time when danger from hostile enemy forces was incurred by the veteran.

Veterans of other Commonwealth and allied countries may also qualify for the Service Pension for service in wars or war-like conflicts in which Australia has engaged. Veterans of Commonwealth forces must have served outside the country of enlistment or be entitled to the award of a campaign medal for service within that country. Allied veterans must have service in formally raised forces. The veteran must be an Australian resident with at least 10 years residency. Service Pension is also available to Australian, other Commonwealth and allied mariners of World War II.

From 1 April 1993, all service pensioners became eligible for 'fringe benefits', provided by the

Commonwealth Government, which include medical and hospital treatment, pharmaceutical benefits and the payment of a telephone allowance.

A number of supplementary benefits are also available under the sub-program. These include:

- rent assistance;
- additional pension in respect of dependent children;
- remote area allowance;
- carer's pension;
- guardian allowance;
- bereavement payment; and
- pharmaceutical allowance.

Tables 7.26 and 7.27 show the total number of pensions in force as at 30 June 1997, and the annual expenditure.

### Housing Sub-program (Defence Service Homes Scheme)

The Defence Service Homes (DSH) Scheme provides financial benefits to recognise the contribution of certain men and women who have served Australia in either peacetime or wartime. The benefits include housing loan interest subsidies, comprehensive home owners' insurance cover at competitive rates, as well as home contents insurance (see table 7.28).

The Scheme was established in 1918 as the War Service Homes Scheme. In 1972 its name was changed to the Defence Service Homes Scheme to recognise the extension of eligibility to those with qualifying peacetime service.

**7.26 SERVICE PENSIONS, 30 June 1997**

|                           | World War I | World War II   | Korea, Malay & FESR(a) | Special overseas service | British Commonwealth | Allied forces | Other        | Total          |
|---------------------------|-------------|----------------|------------------------|--------------------------|----------------------|---------------|--------------|----------------|
|                           | no.         | no.            | no.                    | no.                      | no.                  | no.           | no.          | no.            |
| Veterans                  |             |                |                        |                          |                      |               |              |                |
| Old age                   | 81          | 136 503        | 7 297                  | 2 346                    | 24 039               | 3 982         | 2 274        | 176 522        |
| Permanently incapacitated | 0           | 3              | 837                    | 7 611                    | 199                  | 837           | 2            | 9 489          |
| Tuberculosis(b)           | 1           | 206            | 6                      | 1                        | 3                    | 0             | 0            | 217            |
| Total                     | 82          | 136 712        | 8 140                  | 9 958                    | 24 241               | 4 819         | 2 276        | 186 228        |
| Wives and widows          | 272         | 103 314        | 5 799                  | 7 030                    | 20 321               | 4 159         | 1 625        | 142 520        |
| <b>Total</b>              | <b>354</b>  | <b>240 026</b> | <b>13 939</b>          | <b>16 988</b>            | <b>44 562</b>        | <b>8 978</b>  | <b>3 901</b> | <b>328 748</b> |

(a) Far East Strategic Reserve. (b) Eligibility on these grounds ceased on 2 November 1978.

Source: Department of Veterans' Affairs.

**7.27 SERVICE PENSIONS, Number and Expenditure – 30 June**

|      | Veterans | Wives and widows | Total          | Annual expenditure(a) |
|------|----------|------------------|----------------|-----------------------|
| Year | no.      | no.              | no.            | \$'000                |
| 1991 | 218 398  | 159 511          | <b>377 909</b> | 2 325 077             |
| 1992 | 215 010  | 156 603          | <b>371 613</b> | 2 377 619             |
| 1993 | 210 406  | 152 742          | <b>363 148</b> | 2 389 886             |
| 1994 | 204 793  | 148 184          | <b>352 977</b> | 2 382 307             |
| 1995 | 198 793  | 148 974          | <b>347 713</b> | 2 426 579             |
| 1996 | 192 342  | 145 481          | <b>337 823</b> | 2 609 460             |
| 1997 | 186 228  | 142 520          | <b>328 748</b> | 2 644 118             |

(a) Includes associated allowances.

Source: Department of Veterans' Affairs.

**7.28 DEFENCE SERVICE HOMES SCHEME**

|                          | Unit | 1990–91 | 1991–92 | 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97  |
|--------------------------|------|---------|---------|---------|---------|---------|---------|----------|
| Subsidised loans         |      |         |         |         |         |         |         |          |
| Loans granted            | no.  | 9 316   | 9 043   | 9 158   | 7 639   | 7 171   | 6 861   | (a)6 500 |
| Interest subsidy         | \$m  | 139.7   | 89.3    | 54.3    | 37.5    | 45.1    | 53.0    | 29.2     |
| Loan accounts at 30 June | no.  | 130 000 | 119 500 | 113 741 | 107 124 | 101 887 | 96 518  | 91 029   |
| Building insurance       |      |         |         |         |         |         |         |          |
| Homes insured at 30 June | no.  | 169 294 | 163 316 | 157 510 | 147 853 | 140 508 | 137 012 | 133 711  |

(a) Estimated.

Source: Department of Veterans' Affairs.

In 1985, the Commonwealth Government decided to sell the DSH mortgage portfolio, and the Westpac Banking Corporation became the Scheme's lender on 19 December 1988. Under the Agreement between the Commonwealth and Westpac, the Commonwealth subsidises Westpac for the low-interest loans provided. The subsidy is paid directly to Westpac and represents the difference between the fixed concessional interest rate paid by the borrower and the agreed benchmark interest rate.

Since 1918 the Defence Service Homes Act has made provision for DSH insurance. Building insurance is available to all eligible persons, irrespective of whether they have or have had a DSH loan. This benefit is also available to those who obtain assistance under the Australian Defence Force Home Loans Assistance Scheme. On 1 July 1991 DSH contents insurance, a comprehensive insurance package underwritten by Mercantile Mutual Insurance (Australia) Ltd, became available to veterans and the service community.

The maximum loan available under the DSH Scheme is \$25,000 repayable over 25 years. The interest rate is fixed at 6.85% for the term of the loan. Loans can be used to buy a home or strata unit, build or extend a home, buy a right of residence in a retirement village, refinance an

existing mortgage, or repair or modify an existing home. Since 1 July 1995 a DSH loan is available to obtain granny flat accommodation on another person's property.

**Health Program**

Health care treatment is provided for all disabilities which have been accepted as service-related, and for pulmonary tuberculosis and cancer not related to service. In addition, and subject to certain conditions, health care treatment in Australia is provided for most non-service-related disabilities for: incapacitated veterans receiving Disability Pensions at or above the maximum (100%) general rate; World War II veterans and mariners receiving both Service Pension at any rate and Disability Pension at 50% rate or higher; veterans, mariners or nurses who served in World War I; veterans who were detained by the enemy; war widows and certain other dependants of deceased male veterans whose deaths have been accepted as service related, and of deceased special rate pensioners; certain service pensioners; and returned servicewomen of World War II.

The needs of the veteran population are changing as veterans and their dependants and carers age. Planning for the delivery of health care services for the veteran community is



greatly influenced by the fact that the average age of veterans is now almost 74 years. The health program aims to meet their changing needs through increased access to health and community services, especially in rural and remote locations, and strategies to support carers, health care providers and ex-service organisations. Examples of how the Department is addressing the commitment include:

- Health promotion initiatives — the Department has recognised that health promotion can play a significant part in improving the quality of life of members of the veteran community and help in maintaining their independence. Some initiatives involve links with ex-service organisations and with community organisations such as the Heart Foundation, Diabetes Australia, the Alzheimer's Association and the Australian Sports Commission.
- Health care — the Repatriation Comprehensive Care Scheme is an initiative in veteran health care that was introduced on 1 January 1996. The scheme recognises the complex health needs of the ageing veteran community and the importance of better coordination of care through Local Medical Officers as case managers. The introduction of annual Health Care Plans is pivotal to the new arrangements. The aim of the scheme is to ensure better coordination of care and improved health outcomes for those in greatest need in the veteran community.
- Community and Residential Support Programs — a range of grants programs assist ex-service organisations and community-based organisations to provide assistance and support to the veteran community, both in the wider community and in residential care settings.
- Research and development — health and medical research grants are provided in areas pertinent to the health and wellbeing of the veteran community. Also, research is conducted aimed at providing quality information to support policy analysis.

Younger veterans, from post-World War II conflicts, have identified needs which are additional to those of their older counterparts. These needs have been addressed by recent initiatives which include integrated outpatient, inpatient and support services for the treatment and rehabilitation of veterans with post-traumatic stress disorder (PTSD). A national

centre for war related PTSD is established in Melbourne, at the former Repatriation Hospital, now the Austin and Repatriation Medical Centre. Intensive in-patient treatment programs are available in each State, supported by the Vietnam Veterans' Counselling Service and individual providers.

Vocational rehabilitation services are available to support those at risk of losing employment, and those who wish to return to the workplace. Rehabilitation Allowance may be available to people whose pension entitlement is affected — the intention is that no financial loss should occur for individuals taking up paid employment. Safety-net arrangements enable return to former pension status in the event that employment cannot be sustained (this applies to pensioners receiving above general rate levels of Disability Pension or Service Pension through invalidity).

With the transfer of the Rehabilitation General Hospitals to the States, or their sale to the private sector, all acute hospital care is now provided through the Repatriation Private Patient Scheme. This means that entitled beneficiaries can obtain treatment at a public hospital as a Repatriation private patient, in shared accommodation with a doctor of their choice. According to medical need, if treatment cannot be provided within a reasonable time the Department may approve admission to a private hospital. The former Repatriation hospitals will remain available for treatment if beneficiaries choose to go there.

Under arrangements with State Governments, entitled persons requiring custodial psychiatric care for a service-related disability are treated at departmental expense in State psychiatric hospitals.

Entitled persons may also be provided with dental treatment through the Local Dental Officer (LDO) Scheme, which comprised 7,750 LDOs as at 1 August 1997.

Optometrical services, including the provision of spectacles, the services of allied health professionals, as well as a comprehensive range of aids, appliances and dressings, may be provided to entitled persons.

In addition, entitled persons may be provided with pharmaceuticals through the Repatriation Pharmaceutical Benefits Scheme.

**Vietnam Veterans Counselling Service**

The Vietnam Veterans Counselling Service (VVCS) provides counselling to veterans and their families, as well as working with the ex-service community to promote understanding and acceptance of veterans' problems.

The VVCS is staffed by psychologists and social workers who have specialised knowledge about military service, particularly in Vietnam, and its impact on veterans and their families, especially the impact of post-traumatic stress.

Access to counselling services for rural veterans and their families was greatly improved with the establishment of the Country Outreach Program (COP) in 1988, followed soon after by a toll-free 1800 telephone link to all VVCS centres. Recent service enhancement initiatives under the Younger Veterans' Program include the recruitment of a COP coordinator in most centres, and the creation of programs aimed at promoting better health for veterans. Table 7.29 shows usage of the VVCS.

**The Office of Australian War Graves**

The Office of Australian War Graves has two main functions. Its major area of responsibility is the implementation of government policy for the perpetual commemoration of eligible Australian veterans whose postwar deaths are related to their war service.

It also maintains, on behalf of the Commonwealth War Graves Commission, War Cemeteries and other commemorations in Australia, Papua New Guinea, Solomon Islands (Guadalcanal) and Norfolk Island.

The Office maintains 19,520 war graves in 76 war cemeteries and 900 civil cemeteries. It also maintains over 200,000 post-war commemorations. In 1996–97 the Office commemorated 7,238 veterans who died of war-related causes.

The Office provides an information service to those wishing to visit any of the 102,000 Australian war dead who are buried or memorialised in Australia and overseas. The Office has records relating to the Commonwealth war dead of both World Wars, as well as the Australian dead of the post-World War II conflicts in which Australia has been involved.

Full details of the operations of the Office of Australian War Graves are contained in its Annual Journal.

**7.29 VIETNAM VETERANS COUNSELLING SERVICE**

|                  | 1993–94 | 1994–95 | 1995–96 | 1996–97(a) |
|------------------|---------|---------|---------|------------|
| Consultations    | no.     | no.     | no.     | no.        |
| Face-to-face     | 38 492  | 33 996  | 33 411  | 38 600     |
| Group sessions   | 308     | 356     | 724     | 800        |
| Country outreach | 16 861  | 20 398  | 20 723  | 21 500     |

(a) These are estimated figures as the case management system is undergoing redevelopment.

Source: *Department of Veterans' Affairs*.



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## Introduction

This chapter provides information on various aspects of the health of the Australian population and the activities of government and other bodies relating to health. The chapter uses data from the most up-to-date sources available, including data from the 1995 National Health Survey.

The Australian health care system comprises a diversity of arrangements for planning, funding and delivering health services which feature a mix of private and public sector involvement.

At the national level, health services in Australia are administered by the Commonwealth Government, through two ministers appointed to the portfolio of Health and Family Services. The Minister for Health and Family Services takes an overview role for the whole portfolio and is responsible for Medicare benefits, hospitals, private health insurance and medical work force issues, public health, and Aboriginal health issues. He is assisted by a Parliamentary Secretary responsible for pharmaceutical benefits, Health Services Australia, Australian Hearing Services, the Australia New Zealand Food Authority and the Therapeutic Goods Administration. The Minister for Family Services is responsible for family and children's services, aged and community care services, and disability programs.

The Minister for Veterans' Affairs also administers health services for ex-service personnel and their dependants.

The State and Territory Governments are heavily involved in the direct provision of health services. Each has a minister who is responsible to the Government of the particular State or Territory for the administration of its health authorities. In some States/Territories, the responsibility for health services is shared by several authorities, while in others one authority is responsible for all these functions.

Local governments and private, non-government organisations (both non-profit and for profit) also provide health services. Most medical and dental care is provided by private, non-salaried practitioners.

In recent years, the focus of health and community services has shifted from programs to people. In the process, the Commonwealth Government has taken responsibility for public

health standards and health research, as well as providing benefits for medical, pharmaceutical and aged care services. The States and Territories are primarily responsible for managing and co-ordinating the provision of services and for maintaining direct relationships with most providers.

Under the National Health Information Agreement (NHIA), to which the Australian Bureau of Statistics, the Australian Institute of Health and Welfare, the Commonwealth Department of Health and Family Services, and the various State and Territory health authorities are signatories, the National Health Information Development Plan (NHIDP) sets out agreed national priorities for health information to be considered by the Australian Health Ministers' Advisory Council (AHMAC). This work is managed by the National Health Information Management Group (NHIMG).

As well, a National Public Health Partnership (NPHP) has been established in recognition of the need for a national effort in public health to improve the health status of Australians, in particular the population groups most at risk. The demand for health information generated by the NPHP is being co-ordinated with the requirements, the priorities, the participants and the work program established under the NHIA in the public health area.

## Health status

The World Health Organization (WHO) defines health as "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity". While the level of disease or infirmity can be assessed by mortality, disability and morbidity statistics, the presence of positive well-being is more difficult to measure. Multidimensional instruments which address physical, mental and social functioning continue to be developed and are increasingly being used to measure health and well-being in individuals and populations.

The following health status information includes morbidity and mortality data; disability-related topics are contained in *Chapter 7, Income and welfare*.

## Health and well-being

In the most recent National Health Survey conducted by the Australian Bureau of Statistics (1995), the health of the Australian population was measured using overall health ratings and

the multidimensional SF36 (Short Form, 36 questions) instrument. The SF36 provides scores for eight dimensions of health and well-being: physical functioning; role limitations due to physical problems; bodily pain; general health perceptions; vitality; social functioning; role limitations due to emotional problems; and mental health. Scores range from 0 to 100: the higher the score, the more positive the state of health or well-being.

Overall health assessment revealed that the majority (83%) of the population aged 15 years or more considered themselves to be in good health — rating their health status as good, very good or excellent. These ratings did not vary by sex but were age-related — increasing age being

associated with poorer health status (table 9.1). Similarly, most SF36 scores declined with age, particularly in relation to the physical health dimensions. However, the mental health dimension revealed little age-related effect (graph 9.2).

Health status was strongly related to illness conditions. Of the population who reported no medical condition, 34% assessed their health as excellent and 3% rated their health as fair or poor; of the population who reported one or more medical conditions, only 18% assessed their health as excellent and 18% rated their health as fair or poor. Reductions in SF36 scores also varied according to the numbers and types of medical conditions.

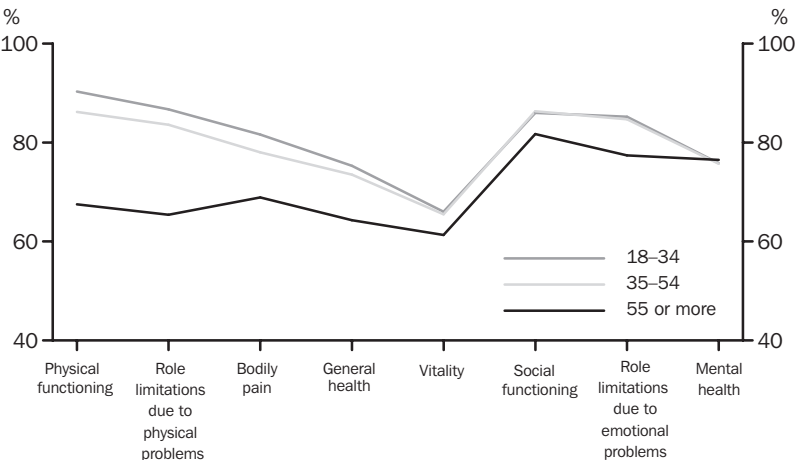
9.1 SELF ASSESSED HEALTH STATUS, 1995

| Rating    | % of population aged 15 years or more |       |      |       |         |                      |           |             |
|-----------|---------------------------------------|-------|------|-------|---------|----------------------|-----------|-------------|
|           | Age group (years)                     |       |      | Sex   |         | Medical condition(a) |           | All persons |
|           | 15–34                                 | 35–54 | 55+  | Males | Females | Nil                  | 1 or more |             |
| Excellent | 23.0                                  | 21.2  | 11.9 | 19.9  | 19.2    | 34.3                 | 18.0      | 19.5        |
| Very good | 40.0                                  | 37.1  | 25.1 | 35.3  | 35.6    | 39.9                 | 35.0      | 35.4        |
| Good      | 26.8                                  | 28.5  | 31.0 | 28.4  | 28.5    | 22.5                 | 29.1      | 28.4        |
| Fair      | 8.2                                   | 10.3  | 22.5 | 12.4  | 12.8    | 3.0                  | 13.6      | 12.6        |
| Poor      | 1.2                                   | 2.9   | 9.6  | 4.1   | 3.9     | 0.3                  | 4.4       | 4.0         |

(a) recent and/or long-term conditions.

Source: 1989–90 and 1995 National Health Surveys.

9.2 GENERAL HEALTH AND WELLBEING, By Age Group — 1995



Source: SF36 Population Norms, Australia, 1995 (4399.0).

## Morbidity

Despite the overall high level of health status reported by Australians in 1995, the majority of the population (86%) also reported the presence of recent or long-term illness or injury. Many of these conditions were minor and/or easily managed (such as most eyesight disorders of refraction or accommodation, which were reported by 47% of the population). Only 8% of the population took days off work or school due to illness or injury during the two weeks prior to interview.

Standardised, self-reported morbidity rates slightly increased between 1989–90 and 1995.

Consistent age-related increases in morbidity were observed (table 9.3).

Excluding eyesight disorders, the leading causes of morbidity in 1995 were respiratory diseases (experienced by 37% of the population), musculoskeletal diseases (27%) and circulatory diseases (21%) (table 9.4). The most frequent causes of morbidity resulting in hospitalisation in 1995–96 were digestive diseases (which accounted for 12% of all hospital separations), circulatory diseases (8%) and injuries (under 8%). Pregnancy-related conditions were also a major cause of hospital admission.

### 9.3 PERSONS EXPERIENCING ILLNESS OR INJURY, By Age

|         | Less than 15 | 15–34 | 35–54 | 55 or more | Total |
|---------|--------------|-------|-------|------------|-------|
| Year    | %            | %     | %     | %          | %     |
| 1995    | 67.6         | 83.5  | 92.3  | 99.8       | 85.9  |
| 1989–90 | 69.9         | 80.5  | 88.9  | 97.6       | 83.3  |

Source: 1989–90 and 1995 National Health Surveys.

### 9.4 MORBIDITY PREVALENCE, 1995

|                                           | Males       | Females     | Persons         | Persons     |
|-------------------------------------------|-------------|-------------|-----------------|-------------|
| Selected conditions                       | %           | %           | '000            | %           |
| Diseases of the nervous system            | 50.2        | 55.5        | 9 559.1         | 52.9        |
| Disorders of refraction and accommodation | 42.3        | 51.8        | 8 510.4         | 47.1        |
| Deafness (complete/partial)               | 12.1        | 6.9         | 1 724.7         | 9.5         |
| Diseases of the respiratory system        | 35.5        | 39.1        | 6 748.7         | 37.4        |
| Hayfever                                  | 13.1        | 14.7        | 2 515.4         | 13.9        |
| Asthma                                    | 10.9        | 11.6        | 2 041.4         | 11.3        |
| Sinusitis                                 | 8.4         | 12.1        | 1 859.0         | 10.3        |
| Diseases of the musculoskeletal system    | 24.8        | 28.1        | 4 783.0         | 26.5        |
| Arthritis                                 | 11.6        | 17.7        | 2 658.7         | 14.7        |
| Diseases of the circulatory system        | 17.6        | 25.1        | 3 868.6         | 21.4        |
| Hypertension                              | 10.0        | 11.4        | 1 935.8         | 10.7        |
| Other conditions                          |             |             |                 |             |
| Headache                                  | 10.9        | 15.5        | 2 457.7         | 13.6        |
| Injury and poisonings(a)                  | 6.8         | 5.8         | 1 153.9         | 6.4         |
| <b>All causes</b>                         | <b>83.8</b> | <b>87.5</b> | <b>15 478.6</b> | <b>85.7</b> |

(a) Excludes injury-related conditions.

Source: 1995 National Health Survey.

## Mortality

Information relating to crude death rates and life expectancy is contained in *Chapter 5, Population*.

Causes of death in Australia are classified according to the ninth revision of the International Classification of Diseases (ICD)

produced by the WHO. Two causes accounted for 69% of the 128,711 deaths in Australia in 1996. Diseases of the circulatory system were the underlying cause for 42% of deaths and neoplasms were the underlying cause for 27%. The third largest group of deaths was those due to diseases of the respiratory system, comprising 8% of total deaths (table 9.5).

### 9.5 CAUSES OF DEATH, 1996

| Cause of death                                                       | Age group (years) |      |       |       |       |       |        |        |        |        | Total          |
|----------------------------------------------------------------------|-------------------|------|-------|-------|-------|-------|--------|--------|--------|--------|----------------|
|                                                                      | under 1           | 1-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64  | 65-74  | 75-84  | 85+    |                |
| <b>Number</b>                                                        |                   |      |       |       |       |       |        |        |        |        |                |
| Infectious and parasitic diseases(a)                                 | 20                | 19   | 24    | 178   | 231   | 151   | 120    | 223    | 390    | 282    | <b>1 638</b>   |
| Neoplasms                                                            | 11                | 143  | 125   | 348   | 1 058 | 2 807 | 5 502  | 10 663 | 10 360 | 4 231  | <b>35 249</b>  |
| Endocrine, nutritional and metabolic diseases and immunity disorders | 21                | 21   | 29    | 34    | 75    | 209   | 403    | 988    | 1 314  | 824    | <b>3 918</b>   |
| Diseases of the nervous system and sense organs                      | 33                | 86   | 74    | 77    | 99    | 126   | 210    | 532    | 1 015  | 846    | <b>3 089</b>   |
| Diseases of the circulatory system                                   | 12                | 33   | 56    | 176   | 577   | 1 619 | 3 626  | 10 414 | 19 620 | 17 849 | <b>53 989</b>  |
| Diseases of the respiratory system                                   | 34                | 31   | 33    | 33    | 90    | 233   | 753    | 2 587  | 3 688  | 2 811  | <b>10 293</b>  |
| Diseases of the digestive system                                     | 3                 | 12   | 8     | 29    | 161   | 305   | 481    | 762    | 1 100  | 1 030  | <b>3 893</b>   |
| Congenital anomalies                                                 | 372               | 77   | 33    | 35    | 26    | 32    | 30     | 25     | 17     | 4      | <b>651</b>     |
| All other diseases(b)                                                | 698               | 13   | 124   | 235   | 198   | 156   | 315    | 817    | 2 357  | 2 977  | <b>7 890</b>   |
| Signs, symptoms and ill-defined conditions                           | 213               | 13   | 20    | 31    | 28    | 19    | 23     | 22     | 53     | 118    | <b>547</b>     |
| Accidents, poisonings and violence                                   | 43                | 344  | 1 291 | 1 377 | 1 175 | 819   | 573    | 628    | 715    | 589    | <b>7 554</b>   |
| All causes                                                           | 1 460             | 792  | 1 817 | 2 553 | 3 718 | 6 476 | 12 027 | 27 661 | 40 629 | 31 561 | <b>128 711</b> |
| <b>Rate(c)</b>                                                       |                   |      |       |       |       |       |        |        |        |        |                |
| Infectious and parasitic diseases(a)                                 | 8                 | 1    | 1     | 6     | 8     | 7     | 8      | 17     | 55     | 140    | <b>9</b>       |
| Neoplasms                                                            | 4                 | 4    | 5     | 12    | 38    | 122   | 358    | 823    | 1 468  | 2 096  | <b>193</b>     |
| Endocrine, nutritional and metabolic diseases and immunity disorders | 8                 | 1    | 1     | 1     | 3     | 9     | 26     | 76     | 186    | 408    | <b>21</b>      |
| Diseases of the nervous system and sense organs                      | 13                | 2    | 3     | 3     | 4     | 5     | 13     | 41     | 144    | 419    | <b>17</b>      |
| Diseases of the circulatory system                                   | 5                 | 1    | 2     | 6     | 21    | 70    | 236    | 804    | 2 780  | 8 841  | <b>295</b>     |
| Diseases of the respiratory system                                   | 13                | 1    | 1     | 1     | 3     | 10    | 49     | 200    | 523    | 1 392  | <b>56</b>      |
| Diseases of the digestive system                                     | 1                 | —    | —     | 1     | 6     | 13    | 31     | 59     | 156    | 510    | <b>21</b>      |
| Congenital anomalies                                                 | 147               | 2    | 1     | 1     | 1     | 1     | 2      | 2      | 2      | 2      | <b>4</b>       |
| All other diseases(b)                                                | 275               | —    | 5     | 8     | 7     | 7     | 21     | 63     | 334    | 1 475  | <b>43</b>      |
| Signs, symptoms and ill-defined conditions                           | 84                | —    | 1     | 1     | 1     | 1     | 2      | 2      | 8      | 59     | <b>3</b>       |
| Accidents, poisonings and violence                                   | 17                | 9    | 48    | 48    | 42    | 35    | 37     | 49     | 10     | 292    | <b>41</b>      |
| All causes                                                           | 575               | 22   | 68    | 89    | 132   | 281   | 782    | 2 135  | 5 756  | 15 632 | <b>703</b>     |

(a) ICD-9-CM was used to code HIV/AIDS conditions for the 1996 data. (b) Includes 700 deaths from conditions originating in the perinatal period, 2,244 deaths from diseases of the genitourinary system, and 3,560 deaths due to mental disorders. (c) Rates are per 100,000 of population at risk, except for children under one year of age which are per 100,000 live births registered.

Source: *Causes of Death, Australia, 1996* (3303.0).



The relative importance of different causes of death varies with age. The majority of infant deaths occur within 28 days of birth, and most are due to conditions present since birth. For those aged from 1 to 44 years, external causes (accidents, poisonings and violence) and neoplasms are the leading causes. For those aged 45 years and over, diseases of the circulatory system and neoplasms are the leading causes, and the likelihood of these conditions being identified as the underlying cause of death increases with age.

### Perinatal deaths

In 1996 the perinatal death rate was 8.5 deaths per 1,000 of all registered births (including live births and stillbirths weighing 500 grams or more at birth). This indicated a slight rise from the perinatal death rate of 8.1 deaths in 1995. The increase reflected a rise in the number of fetal deaths, with the fetal death rate increasing from 5.0 deaths per 1,000 registered births in 1995 to 5.6 in 1996. The neonatal death rate fell from 3.2 to 3.0 deaths per 1,000 live births (table 9.6).

Hypoxia, birth asphyxia and other respiratory conditions were responsible for 29% of perinatal deaths in 1996, while congenital anomalies accounted for 18% of perinatal deaths. Other conditions originating in the perinatal period accounted for 34% of perinatal deaths. Examples of such conditions include infections specific to the perinatal period, disorders relating to long gestation and high birthweight, and hydrops fetalis not due to isoimmunisation. The most common maternal condition reported was complications of the placenta, cord and membranes, reported for 28% of perinatal deaths.

## National Health Priority Areas

The National Health Priority Areas initiative seeks to focus public health efforts and resources on areas that contribute the greatest burden of illness in the community. It is a collaborative activity between Commonwealth, State and Territory Governments and the non government sector.

**9.6 CAUSES OF PERINATAL DEATHS, 1996**

| Cause of death                                                  | Number of deaths |            |              | Rate per 1,000 live births |            |            |
|-----------------------------------------------------------------|------------------|------------|--------------|----------------------------|------------|------------|
|                                                                 | Fetal            | Neonatal   | Perinatal    | Fetal                      | Neonatal   | Perinatal  |
| <b>Conditions in fetus/infant</b>                               |                  |            |              |                            |            |            |
| Slow fetal growth, fetal malnutrition and immaturity            | 125              | 106        | 231          | 0.5                        | 0.4        | 0.9        |
| Birth trauma                                                    | —                | 46         | 46           | —                          | 0.2        | 0.2        |
| Hypoxia, birth asphyxia and other respiratory conditions        | 471              | 149        | 620          | 1.8                        | 0.6        | 2.4        |
| Fetal and neonatal haemorrhage                                  | 21               | 51         | 72           | 0.1                        | 0.2        | 0.3        |
| Haemolytic disease of fetus or newborn                          | 4                | 2          | 6            | —                          | —          | —          |
| Other conditions originating in the perinatal period            | 621              | 114        | 735          | 2.4                        | 0.5        | 2.9        |
| Congenital anomalies                                            | 159              | 239        | 398          | 0.7                        | 0.9        | 1.6        |
| All other causes                                                | 10               | 52         | 62           | —                          | 0.2        | 0.2        |
| <b>Conditions in mother</b>                                     |                  |            |              |                            |            |            |
| Maternal conditions which may be unrelated to present pregnancy | 198              | 64         | 262          | 0.7                        | 0.3        | 1.0        |
| Maternal complications of pregnancy                             | 123              | 192        | 315          | 0.5                        | 0.7        | 1.2        |
| Complications of placenta, cord and membranes                   | 505              | 104        | 609          | 2.0                        | 0.4        | 2.4        |
| Other complications of labour and delivery                      | 71               | 26         | 97           | 0.3                        | 0.1        | 0.4        |
| No maternal condition reported                                  | 514              | 373        | 887          | 2.0                        | 1.5        | 3.5        |
| <b>All causes</b>                                               | <b>1 411</b>     | <b>759</b> | <b>2 170</b> | <b>5.6</b>                 | <b>3.0</b> | <b>8.6</b> |

Source: *Causes of Death, Australia, 1996* (3303.0).

Priorities are established through national consultation taking into account:

- the importance of the disease to the community;
- the impact of the disease (including morbidity, mortality, potential years of life lost, costs to the individual and the community, and consequent inequities such as socioeconomic disadvantage);
- the achievability of improved outcomes; and
- the feasibility of measuring the impact of activities.

At present, five priority areas have been identified — cardiovascular health; cancer control; injury prevention and control; mental health; and diabetes mellitus. For each of these areas, indicators continue to be developed and monitored and program initiatives established to improve health outcomes.

## Cardiovascular health

The high prevalence of cardiovascular disease (CVD) is a major health concern for both health authorities and the general population. It is the leading cause of death in Australia and results in a considerable burden, in terms of illness, disability and economic costs. Although mortality due to CVD is declining, the risk of developing CVD continues to be a concern due to the significant prevalence of modifiable risk

factors such as cigarette smoking, high blood pressure, high blood cholesterol levels, obesity and limited physical activity.

In 1996, 42% of all deaths (53,989 deaths) were due to diseases of the circulatory system. Ischaemic heart disease accounted for 23% of all deaths, with cerebrovascular diseases accounting for a further 10%. Between 1981 and 1995, age-standardised death rates for CVD declined by 37%. Over this time period, male CVD death rates decreased from 521 to 314 deaths per 100,000, while female CVD death rates decreased at a slower rate, from 306 to 201 deaths per 100,000.

The prevalence of cardiovascular disease in the adult Australian population increased from 17% (2.2 million) in 1989–90 to 21% (2.8 million) in 1995 (table 9.7). Age and sex standardisation of the data indicated that, over this period, the ageing of the Australian population played only a small part in the increase in prevalence of CVD.

Leading cardiovascular conditions in 1995 were hypertension, which was reported by 14% of the adult population, followed by heart disease (4%). Age-specific prevalence rates for cardiovascular conditions increased from 4% for the 18–24 year age group to 61% for the 75 years and over age group. Hypertension, which is also a risk factor for other CVD, was the cardiovascular condition most strongly correlated with age.

**9.7 PERSONS AGED 18 YEARS AND OVER WITH CARDIOVASCULAR CONDITIONS**

| Type of condition                                  | 1989–90        |             | 1995           |             |
|----------------------------------------------------|----------------|-------------|----------------|-------------|
|                                                    | '000           | %           | '000           | %           |
| Hypertension                                       | 1 535.1        | 12.3        | 1 932.5        | 14.4        |
| Heart disease                                      | 440.1          | 3.5         | 493.5          | 3.7         |
| Atherosclerosis                                    | 45.7           | 0.4         | 25.5           | 0.2         |
| Stroke (and other cerebrovascular disease)         | 89.6           | 0.7         | 115.7          | 0.9         |
| Other diseases of the circulatory system           | 274.8          | 2.2         | 694.8          | 5.2         |
| Ill-defined signs and symptoms of heart conditions | 256.2          | 2.1         | 337.5          | 2.5         |
| <b>Total cardiovascular conditions(a)</b>          | <b>2 164.7</b> | <b>17.4</b> | <b>2 795.5</b> | <b>20.9</b> |

(a) Each person may have reported more than one type of condition, and therefore components may not add to totals.

Source: National Health Survey: Cardiovascular and Related Conditions, Australia, 1995 (4372.0).

## Cancer control

Cancer (malignant neoplasm) is a major cause of morbidity and mortality. It impacts on life expectancy and quality of life and places high demands on preventive, treatment, support and palliative care services. Modification of risk factors and early detection through screening programs are important aspects of cancer control. Seven cancers have been targeted in this priority area — lung cancer; melanoma; non-melanocytic skin cancer; colo-rectal cancer; prostate cancer in males; and cancer of the cervix and breast in females.

The National Cancer Statistics Clearing House reports that each year in Australia about 70,000 new cases of cancer are diagnosed. This equates to an average risk of one in three men and one in four women being directly affected by cancer in their lifetime.

In 1996, 27% of all deaths (34,668 deaths) were due to cancer. Overall, cancer of the trachea, bronchus and lung was the leading cause of cancer deaths, accounting for 20% of all cancer deaths. Among males, leading causes were cancer of the trachea, bronchus and lung (24% of all male cancer deaths) followed by prostate cancer (14%) and colon cancer (10%). Among females, leading causes were breast cancer (17% of all female cancer deaths) followed by cancer of the trachea, bronchus and lung (14%) and colon cancer (11%). Death rates showed marked increase with age and were greater for males than females for most age groups (the exception being the 25–54 year age group, due to the contribution of female reproductive cancers).

Information relating to cigarette smoking and alcohol intake, which are modifiable risk factors for some cancers, is contained in the section *Health lifestyles and risk factors*. Sun exposure is another modifiable risk factor that is addressed in ABS National Health Surveys.

Australians are at high risk of skin cancer. Exposure to sunlight is strongly associated with the risk of contracting skin cancers, and therefore sun protection is an important preventive measure. Information from the 1995 National Health Survey indicated that most people (82% of males and 83% of females) had deliberately taken measures in the month preceding the survey to protect themselves against the sun's ultra violet rays. Males who protected themselves against the sun were more likely to wear a hat than females (81% compared with 62%), and less likely to use a sunscreen than females (47% and 61%). Among children aged less

than 15 years, 87% had used some form of sun protection in the previous month, most commonly hats, and 84% reported that they always or usually used sun protection.

Proportions of those who used sun protective measures differed by the State or Territory in which they lived. The lowest rates of sun protection use were recorded by those living in Victoria (72%), the highest by those in Queensland (92%).

Reporting in this survey indicated that 60% of the population regularly checked their skin (or had their skin checked by a doctor) for any changes to freckles and moles. Females were more likely than males to have their skin checked (64% and 56% respectively).

## Cancer screening

National breast and cervical cancer screening programs were established during the early 1990s to improve reliability and accessibility of services and to reduce morbidity and mortality arising from these cancers. Free access to breast screening services is provided for women aged 50–69 years; cervical screening is supported through Medicare. These programs are cost-shared between the Commonwealth Government and the State and Territory Governments.

In both screening programs, all States and Territories are contributing to the collection and analysis of agreed national minimum datasets, to assist revision of policy, monitor program performance and aid the development of targeted strategies. As part of the national monitoring process, ABS National Health Surveys obtain information about breast and cervical screening from women aged 18 years and over.

A screening mammogram is considered to be the most effective method currently available for the detection of breast cancer, particularly in its early stages. The current national program on breast cancer screening recommends that all women aged 50 years and over should be screened every two years. The 1995 National Health Survey showed that, overall, 39% of women had undergone a mammogram at some time in their life, and 66% of those reported having the test less than two years prior to the interview. Women in the 45–64 year age group were most likely to have had a mammogram (70%). The most commonly reported reasons for having a mammogram were general check-up (50%) and the presence of symptoms for breast cancer (e.g. lumps) (24%).

Other actions to detect breast cancer include regular breast examinations. Of women aged 45–64, 56% reported regular breast examination by a doctor or medical assistant, and 73% reported regularly examining their own breasts.

The current National Women's Health Policy recommends that all women, including those who have no symptoms or history suggestive of cervical pathology, should have a routine Pap smear at least every two years. In 1995, 84% of women had undergone at least one Pap smear, and the majority of those had had their last test within the two years prior to the survey (68%). Women in the youngest age group (18–24 years) and those in the oldest age group (75 years and over) were least likely to have had a Pap smear at some time in their life (38% and 51% respectively had never been tested).

## Injury prevention and control

Injuries are a significant source of preventable illness, disability and mortality in Australia, and place a heavy demand on health services. Over the past decade, injuries, poisonings and violence (referred to as external causes)

accounted for more than 7,000 deaths per year. These figures include suicides. National hospital statistics for 1995–96 show external causes to be the third leading cause of hospital separations.

In 1996, 6% of all deaths (7,554 deaths) were due to external causes (table 9.8). This represented a 2.2% increase in the age and sex standardised death rate from 1995. Leading external causes of death were suicide which accounted for 32% of all external causes of death, followed by motor vehicle accidents (26%) and accidental falls (15%). Males accounted for 72% of all deaths due to external causes (male death rate of 59.7 per 100,000 compared with 23.1 for females). Male death rates for suicide and motor vehicle accidents were over four and two times higher than the respective female rates. Accidental falls were the only external cause with a higher rate for females. Age-specific death rates showed marked increases in deaths due to external causes in the older population (rising from 12 to 367 deaths per 100,000 for males and 7 to 260 for females for the populations aged 1–14 years versus 85 years and over). Deaths due to accidental falls accounted for most of this age-related increase.

**9.8 EXTERNAL CAUSES OF DEATH, 1996**

| Cause of death                  | no.   | %     | Crude death rate(a) |
|---------------------------------|-------|-------|---------------------|
| <b>MALES</b>                    |       |       |                     |
| Suicide                         | 1 931 | 35.6  | 21.2                |
| Motor vehicle traffic accidents | 1 398 | 25.7  | 15.4                |
| Accidental falls                | 523   | 9.6   | 5.7                 |
| Homicide                        | 223   | 4.1   | 2.4                 |
| Drowning and submersion         | 188   | 3.5   | 2.1                 |
| Poisoning by drugs/medications  | 218   | 4.0   | 2.4                 |
| Other                           | 950   | 17.5  | 10.4                |
| All external causes             | 5 431 | 100.0 | 59.7                |
| <b>FEMALES</b>                  |       |       |                     |
| Suicide                         | 462   | 21.8  | 5.0                 |
| Motor vehicle traffic accidents | 544   | 25.6  | 5.9                 |
| Accidental falls                | 579   | 27.3  | 6.3                 |
| Homicide                        | 103   | 4.9   | 1.1                 |
| Drowning and submersion         | 59    | 2.8   | 0.6                 |
| Poisoning by drugs/medications  | 79    | 3.7   | 0.9                 |
| Other                           | 297   | 14.0  | 3.2                 |
| All external causes             | 2 123 | 100.0 | 23.1                |
| <b>PERSONS</b>                  |       |       |                     |
| Suicide                         | 2 393 | 31.7  | 13.1                |
| Motor vehicle traffic accidents | 1 942 | 25.7  | 10.6                |
| Accidental falls                | 1 102 | 14.6  | 6.0                 |
| Homicide                        | 326   | 4.3   | 1.8                 |
| Drowning and submersion         | 247   | 3.3   | 1.4                 |
| Poisoning by drugs/medications  | 297   | 3.9   | 1.6                 |
| Other                           | 1 247 | 16.5  | 6.8                 |
| All external causes             | 7 554 | 100.0 | 41.3                |

(a) Deaths per 100 000 population.

Source: *Causes of Death, Australia, 1996* (3303.0).

The 1995 National Health Survey identified injuries and injury-related conditions caused by either accidents, incidents (whether intentional or not) or exposures (to a harmful factor). Overall, 2.83 million Australians (16% of the population) reported having an injury or injury-related condition, with 6% of the population reporting an injury and 11% reporting an injury-related condition (table 9.9).

Injuries were most prevalent among younger age groups, with 15–24 year olds having the highest rates. The most frequently reported injury condition was dislocations, sprains and strains, which affected 1.6% of the population. Injury-related conditions, however, were most prevalent among the middle and older age groups, where the population has had more time to accumulate the long-term effects of injuries. Of the injury-related conditions, the combined conditions of disorders of the intervertebral disc and unspecified back problems formed the most frequently reported condition, with 2.4% of the population affected. Partial or complete deafness (resulting from accident, incident or exposure) was reported by 1.5% of the population, although males were affected at a rate 14 times greater than females.

A National Occupational Health and Safety Commission (NOHSC) report was prepared for 1994–95, relating to workers' compensation cases involving a fatality, a permanent disability or five days or more off work. This was based on information supplied by Commonwealth, State and Territory agencies which administer workers' compensation systems. The report contained the following main findings: 1 in 37 workers sustained a work related injury or disease; 74% of the cases were male; and the average duration of injury or disease cases was 8.6 weeks (these results excluded data from Victoria and the Australian Capital Territory). In 1994–95, the total estimated cost of worker's compensation claims for all of Australia was \$4.1 billion<sup>1</sup>.

## Mental health

Mental illness causes considerable suffering and disability for individuals, and the burden of illness within the community is high. Care of people with mental illness has increasingly shifted from institutions to mental health services provided in the general health sector, such as psychiatric units in general hospitals, and a range of community-based services across the health, housing and community service sectors designed to support individuals and their families.

### 9.9 PERSONS WITH AN INJURY OR INJURY-RELATED CONDITION, By Sex — 1995

|                                                                    | Males        | Females      | Persons      | Persons         |
|--------------------------------------------------------------------|--------------|--------------|--------------|-----------------|
|                                                                    | %            | %            | %            | '000            |
| <b>Injuries</b>                                                    |              |              |              |                 |
| Fractures                                                          | 0.6          | 0.5          | 0.6          | 100.0           |
| Dislocations, sprains, and strains                                 | 2.0          | 1.3          | 1.6          | 296.1           |
| Open wounds                                                        | 0.9          | 0.5          | 0.7          | 124.8           |
| Bruising and crushing                                              | 0.8          | 0.6          | 0.7          | 126.7           |
| Burns and scalds                                                   | 0.5          | 0.5          | 0.5          | 84.3            |
| Other injuries                                                     | 1.3          | 1.4          | 1.4          | 245.9           |
| <i>Total injuries(a)(b)</i>                                        | <i>6.1</i>   | <i>4.8</i>   | <i>5.5</i>   | <i>989.4</i>    |
| <b>Injury-related conditions</b>                                   |              |              |              |                 |
| Deafness (partial/complete)                                        | 2.8          | 0.2          | 1.5          | 274.4           |
| Disorders of the intervertebral disc and unspecified back problems | 3.1          | 2.1          | 2.4          | 440.1           |
| Arthritis                                                          | 1.5          | 1.2          | 1.4          | 250.7           |
| Other diseases of the musculoskeletal system and connective tissue | 3.3          | 2.3          | 2.8          | 500.2           |
| <i>Total injury-related conditions (a)(b)</i>                      | <i>13.6</i>  | <i>7.5</i>   | <i>10.5</i>  | <i>1 898.4</i>  |
| <b>Total injury and injury-related conditions(a)(b)</b>            | <b>19.3</b>  | <b>12.1</b>  | <b>15.7</b>  | <b>2 833.2</b>  |
| No injury or injury related condition                              | 80.7         | 87.9         | 84.3         | 15 227.9        |
| <b>Total Australian population(a)(b)</b>                           | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>18 061.0</b> |

(a) Only the more frequently reported injury or injury-related conditions are listed; therefore components do not add to totals.

(b) Persons may have reported more than one injury or injury-related condition; therefore components do not add to totals.

Source: 1995 National Health Survey: Injuries, Australia (4384.0).

Commonwealth funding of \$269 million over six years to 30 June 1998 is being provided to assist in implementing the National Mental Health Strategy to accelerate the process of reform in the mental health sector. Of this, about \$189 million is available directly to the States and Territories. About \$68 million is directed towards national initiatives and \$5.4 million is available for supporting mental health medical research.

The main objectives of the reform process include: expanding community-based mental health services; improving consumer rights; reforming mental health legislation; restructuring the mental health work force; and promoting mental health and community awareness of mental health problems and mental disorders.

The need for national information about mental health is therefore of paramount importance. This need is being addressed by a range of projects funded by DHFS under the National Mental Health Strategy. A National Survey of Mental Health Services has been conducted since 1993 with results presented in an annual report on the provision of mental health services across States. In addition, three population surveys were funded during 1997, respectively covering adults, children and adolescents, and people with low prevalence disorders such as schizophrenia.

The Survey of Mental Health and Well-being of adults has been conducted by the ABS. The objectives of the survey were to provide a measure of how many adult Australians have specific mental disorders, what disablement is associated with these disorders and what use is made of health and human services. Survey results to be released in 1998, and the publication, will provide valuable information about the mental health status of Australians.

## **Diabetes mellitus**

The rising prevalence of diabetes in Australia is a major concern in terms of social and economic costs. While rates of hospitalisation and deaths directly attributed to diabetes are low, diabetes is often mentioned as a contributory cause on death certificates and has a major impact on quality of life. People with diabetes experience

reduced life expectancy and are more likely than people without diabetes to experience major health complications involving the eyes, kidneys, nerves and arteries<sup>2</sup>. Population groups at particular risk of diabetes are older people, Indigenous people and some sections of the overseas population.

In 1996, 2.3% of all deaths (2,991 deaths) were due to diabetes mellitus. Death rates increased with age and were greater for males than females aged 45 years and over. Between 1981 and 1995, the death rate for diabetes mellitus (age standardised death rate per 100,000 total population as at 30 June 1991) increased slightly overall and fluctuated between 12.2 (1982) and 14.5 (1994). However, these figures indicate only the number of deaths in which diabetes was recorded as the underlying cause of death. From 1994, provision was made to identify all deaths where diabetes was mentioned on the death certificate. In 1995, diabetes was mentioned on 8,839 death certificates and therefore could possibly have contributed to 49.0 deaths per 100,000.

The prevalence of diabetes mellitus in the Australian population increased from 1.8% in 1989–90 to 2.4% in 1995. Although small, this increase was statistically significant. Age and sex standardisation of the data indicated that the ageing of the Australian population played only a small part in the increase in prevalence of diabetes. In 1995, of the 2.4% of Australians (430,700 people) who reported that they had been diagnosed with diabetes at some time during their lives, 82% said that they currently had diabetes. Of people ever diagnosed with diabetes, 42% reported non-insulin dependent diabetes, 18% reported insulin dependent diabetes and 6% reported gestational diabetes (table 9.10). The remainder of people with diabetes did not know what type they had. High sugar levels in the blood or urine can indicate diabetes or its precursor known as impaired glucose tolerance. In addition to those reporting a diagnosis of diabetes, 1.2% of Australians (224,800 people) reported having been diagnosed with high sugar levels at some time during their lives. Of this group, 16% reported that they currently had high sugar levels.



## 9.10 PEOPLE WITH DIABETES(a), By Type and Sex — 1995

|                                         | Males        | Females      | Persons      | Persons      |
|-----------------------------------------|--------------|--------------|--------------|--------------|
|                                         | '000         | '000         | '000         | %            |
| Type of diabetes                        |              |              |              |              |
| Non-insulin dependent diabetes mellitus | 92.9         | 88.9         | 181.8        | 42.2         |
| Insulin dependent diabetes mellitus     | 43.7         | 35.8         | 79.5         | 18.5         |
| Gestational diabetes mellitus           | —            | 27.0         | 27.0         | 6.3          |
| Diabetes type unknown                   | 69.6         | 72.8         | 142.4        | 33.1         |
| <b>Total diabetes</b>                   | <b>206.2</b> | <b>224.5</b> | <b>430.7</b> | <b>100.0</b> |

(a) Based upon people who reported a diabetes diagnosis at any time during their lives.

Source: National Health Survey: Diabetes, Australia, 1995 (4371.0).

## Prostate cancer deaths, 1982–96

### Introduction

Prostate cancer (ICD–9 code 185) is the malignant enlargement of the prostate gland and is responsible for over 13% of all deaths from cancer in males. For over two decades, prostate cancer has ranked as the second leading cause of cancer deaths in males, after lung cancer which accounts for about a quarter of all male cancer deaths. Although the aetiology of prostate cancer is not yet fully understood, some life style, environmental and familial or genetic factors have been found to be associated with the disease<sup>3</sup>. Life style factors related to the disease include high fat diet, obesity and lack of physical activity. It has been suggested that contamination of the environment may also be an important factor<sup>4</sup>.

### Trends in deaths

From 1982 to 1996, deaths per year ascribed to prostate cancer have nearly doubled, rising from 1,356 in 1982 to 2,660 in 1996 (table 9.11). The corresponding death rate has risen from 17.9 deaths to 29.2 deaths per 100,000 of the male population during the same period, an increase of 63%. The age-standardised death rate for prostate cancer, however, increased by 19%, rising from 21.7 deaths per 100,000 of the male population in 1982 to 25.8 in 1996. This suggests that a 44 percentage point rise in the death rate during the period was due to the ageing of the male population. Since 1993, the standardised death rate from prostate cancer has declined slowly.

### 9.11 PROSTATE CANCER DEATHS, Number and Rates

| Year | Number of deaths | Crude death rate | Standardised death rate(a) |
|------|------------------|------------------|----------------------------|
| 1982 | 1 356            | 17.9             | 21.7                       |
| 1983 | 1 394            | 18.1             | 21.7                       |
| 1984 | 1 403            | 18.0             | 20.9                       |
| 1985 | 1 588            | 20.1             | 22.9                       |
| 1986 | 1 642            | 20.5             | 22.6                       |
| 1987 | 1 744            | 21.5             | 23.2                       |
| 1988 | 1 884            | 22.8             | 24.2                       |
| 1989 | 2 014            | 24.0             | 25.0                       |
| 1990 | 2 091            | 24.6             | 25.2                       |
| 1991 | 2 115            | 24.5             | 24.5                       |
| 1992 | 2 370            | 27.2             | 26.5                       |
| 1993 | 2 543            | 28.9             | 27.5                       |
| 1994 | 2 590            | 29.2             | 27.1                       |
| 1995 | 2 575            | 28.6             | 26.0                       |
| 1996 | 2 660            | 29.2             | 25.8                       |

(a) Standardised rate per 100,000 males. The 1991 total Australian male population was used as the standard.

Source: ABS, published and unpublished causes of death data 1982–1996.

### International comparison

The 1994 Australian age-standardised death rate from prostate cancer (27.1 deaths per 100,000 males) was noticeably lower than comparable rates reported among the countries selected for comparison. It should be noted that the years used for comparison vary between 1992 and 1994 for different countries. Since annual death rates have fluctuated in most countries, the relative ranking of any country referred to in the analysis can vary according to the year selected for comparison. These rates were computed using the latest information available from the WHO<sup>5</sup>. International comparisons of prostate cancer death rates can also be affected by variations in diagnosis and reporting practices between countries. Nevertheless, the standardised death

rates for the countries selected for comparison still provide some indication of the relative ranking and show mainly the influence of genetic and environmental factors.

There is a wide variation in the standardised death rates from prostate cancer across the countries, ranging from 2.0 per 100,000 men in the Republic of Korea to 35.1 in Norway (table 9.12). The standardised death rates from prostate cancer recorded for Norway, Switzerland and New Zealand were substantially higher than the Australian rate for 1994. The Netherlands recorded a death rate similar to that in Australia. However, in 1994 Australia had a standardised death rate for prostate cancer much higher than in countries such as the United Kingdom, the USA and Canada.

#### 9.12 AGE STANDARDISED DEATH RATE(a) FROM PROSTATIC CANCER IN SELECTED COUNTRIES

| Country           | Year        | Standardised death rate(a) |
|-------------------|-------------|----------------------------|
| Norway            | 1993        | 35.1                       |
| Switzerland       | 1994        | 33.8                       |
| New Zealand       | 1994        | 29.6                       |
| Netherlands       | 1994        | 27.9                       |
| <b>Australia</b>  | <b>1994</b> | <b>27.1</b>                |
| United Kingdom    | 1994        | 24.9                       |
| United States     | 1992        | 24.8                       |
| Canada            | 1993        | 23.9                       |
| Japan             | 1994        | 6.3                        |
| Hong Kong         | 1993        | 4.8                        |
| Republic of Korea | 1994        | 2.0                        |

(a) Standardised death rate per 100,000 males. The 1991 total Australian male population was used as the standard for all countries in the comparison.

Source: 1995 World Health Statistics Annual, WHO, Geneva.

### Age-specific death rates

As prostate cancer is a disease associated with ageing, the number of deaths reported for men under the age of 45 years was extremely small, totalling only 7 deaths over the 15-year period. Therefore, further analysis has been restricted to men 45 years and over, the group most exposed to the risk of prostate cancer death. The number of deaths and age-standardised death rates have been averaged over three-yearly intervals in table 9.13, to minimise the effects of random fluctuations.

There is a substantial time lag between the onset of the disease and its progression to a tumour which generally emerges at old age; as a result the age-specific death rates from prostate cancer rise with advancing age. The age-specific death rate from prostate cancer rises rapidly from 45–49 to 65–69 and then increases more slowly. This may imply the likelihood of men of older ages dying from causes other than prostate cancer as the death at old age is normally accompanied by a number of coexisting conditions rather than a single morbid condition.

The age-specific death rates from prostate cancer rose for most age groups during the reference period. The rate of increase, however, varied between age groups and time periods. While the age-specific death rates have fluctuated over the 15-year period, they were substantially higher at the end of the period (1994–96) than the beginning (1982–84). These increases were particularly rapid among men over the age of 60 years, ranging from 17.2% for the age group 75–79 years to 39.5% in the group 85 years and over.

#### 9.13 PROSTATE CANCER DEATHS, By Age

| Age group   | Three year average death rate per 100,000 males aged 45 years and over |         |         |         |         |       |
|-------------|------------------------------------------------------------------------|---------|---------|---------|---------|-------|
|             | 1982–84                                                                | 1985–87 | 1988–90 | 1991–93 | 1994–96 | 1996  |
| 45–49       | 0.8                                                                    | 0.8     | 0.9     | 1.1     | 1.3     | 1.5   |
| 50–54       | 3.1                                                                    | 3.1     | 3.3     | 3.7     | 3.6     | 3.5   |
| 55–59       | 11.2                                                                   | 10.9    | 12.5    | 14.8    | 12.3    | 13.3  |
| 60–64       | 29.8                                                                   | 32.4    | 35.8    | 34.9    | 37.3    | 32.8  |
| 65–69       | 68.2                                                                   | 75.5    | 79.4    | 90.5    | 82.9    | 83.6  |
| 70–74       | 144.0                                                                  | 147.9   | 170.7   | 176.1   | 176.1   | 169.1 |
| 75–79       | 276.0                                                                  | 296.4   | 321.1   | 320.0   | 323.4   | 318.5 |
| 80–84       | 462.7                                                                  | 486.2   | 515.9   | 550.5   | 547.9   | 531.0 |
| 85 and over | 674.1                                                                  | 751.7   | 793.8   | 882.0   | 940.6   | 955.3 |

Source: Causes of Death, Australia, 1995 (3303.0); ABS, unpublished causes of death data, 1996.



## Other health areas

### Communicable diseases

In 1996 infectious diseases accounted for 1.3% of all deaths (1,638 deaths). In addition, pneumonia and influenza accounted for a further 1.4% of deaths (1,836 deaths). Death rates increased with age and were greater for males than females aged 45 years and over.

The prevalence of infectious diseases combined with influenza and the common cold was 13% in 1995 and accounted for 12% of medical consultations in the two weeks prior to NHS interview. Infectious diseases accounted for 2% of total hospital separations in 1995–96; acute respiratory infections, pneumonia and influenza accounted for a further 2% of separations.

Under the National Notifiable Diseases Surveillance System, State and Territory health authorities submit reports of communicable disease notifications for compilation by the Commonwealth Department of Health and Family Services. The range of diseases required to be reported to State and Territory health authorities has varied over time, and case definitions of these diseases have varied from State to State. Since 1991, 42 diseases and disease groups have been included, as recommended by the National Health and Medical Research Council.

Campylobacteriosis, a bacterial disease transmitted by contaminated food or water, has been the most commonly reported disease in

recent years (table 9.14). Vaccine-preventable disease notifications (including measles, mumps, pertussis and rubella) declined from 14,121 to 7,913 over the three year period 1994–96.

### HIV and AIDS

Surveillance for human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) is conducted by the National Centre in HIV Epidemiology and Clinical Research in collaboration with the State and Territory health authorities and the Commonwealth Government.

By the end of 1996, 20,299 HIV infections, 7,296 AIDS diagnoses and 5,260 deaths following AIDS had been reported (table 9.15).

Surveillance indicates that AIDS incidence peaked during 1994, and a slow but steady decline in incidence is projected. This pattern reflects the decline in new HIV infections since the sharp peak during the mid 1980s, and the use of new therapeutic regimes may also be contributing to the decline in incidence.

HIV infection continues to overwhelmingly affect males (95%) and disease transmission continues to predominantly occur by sexual contact between men, accounting for about 80% of all HIV transmission in Australia (table 9.16). Although heterosexual contact accounts for only a small proportion of overall disease transmission, this mode of infection disproportionately affects the Indigenous population and is continuing to rise, accounting for 16% of disease transmission in 1996.

## 9.14 NATIONAL NOTIFIABLE DISEASE SURVEILLANCE SYSTEM REPORTS(a)

| Disease                                 | Notifications |               |               | Rate per 100,000 population |              |              |
|-----------------------------------------|---------------|---------------|---------------|-----------------------------|--------------|--------------|
|                                         | 1994          | 1995          | 1996          | 1994                        | 1995         | 1996         |
|                                         | no.           | no.           | no.           |                             |              |              |
| Arbovirus Infection(b)                  | 587           | 67            | 52            | 3.3                         | 0.4          | 0.3          |
| Barmah Forest virus infection           | —             | 756           | 837           | —                           | 4.7          | 4.6          |
| Botulism(c)                             | —             | —             | —             | 0                           | 0            | 0            |
| Brucellosis                             | 34            | 29            | 38            | 0.2                         | 0.2          | 0.2          |
| Campylobacteriosis                      | 10 117        | 10 933        | 12 158        | 85.8                        | 91.6         | 100.4        |
| Chancroid                               | —             | 2             | 3             | 0                           | 0            | 0            |
| Chlamydial infection(b)                 | 6 159         | 6 411         | 8 420         | 55.3                        | 53.7         | 69.6         |
| Cholera                                 | 3             | 5             | 4             | 0                           | 0            | 0            |
| Dengue                                  | 17            | 34            | 43            | 0.1                         | 0.2          | 0.2          |
| Diphtheria                              | —             | —             | —             | 0                           | 0            | 0            |
| Donovanosis                             | 117           | 85            | 50            | 1.1                         | 0.8          | 0.5          |
| Gonococcal infection                    | 2 971         | 3 259         | 4 173         | 16.7                        | 18.1         | 22.8         |
| Haemophilus influenzae type b infection | 169           | 74            | 51            | 1.0                         | 0.4          | 0.3          |
| Hepatitis A                             | 1 894         | 1 601         | 2 150         | 10.6                        | 8.9          | 11.7         |
| Hepatitis B — incident                  | 327           | 321           | 225           | 1.9                         | 1.8          | 1.2          |
| Hepatitis C — incident                  | 43            | 69            | 72            | 0.6                         | 0.8          | 0.8          |
| Hepatitis C — unspecified               | —             | —             | 9 489         | —                           | —            | 89.3         |
| Hepatitis(b)                            | 42            | 55            | 36            | 0.3                         | 0.3          | 0.2          |
| Hydatid infection                       | 56            | 46            | 45            | 0.3                         | 0.3          | 0.2          |
| Legionellosis                           | 179           | 160           | 192           | 1.0                         | 0.9          | 1.0          |
| Leprosy                                 | 11            | 7             | 10            | 0.1                         | 0            | 0.1          |
| Leptospirosis                           | 123           | 148           | 227           | 0.7                         | 0.8          | 1.2          |
| Listeriosis                             | 34            | 58            | 70            | 0.2                         | 0.3          | 0.4          |
| Lymphogranuloma venereum                | 2             | 1             | 0             | 0                           | 0            | 0            |
| Malaria                                 | 703           | 625           | 849           | 3.9                         | 3.5          | 4.6          |
| Measles                                 | 4 895         | 1 324         | 498           | 27.4                        | 7.3          | 2.7          |
| Meningococcal infections                | 383           | 382           | 426           | 2.2                         | 2.1          | 2.3          |
| Mumps(c)                                | 94            | 153           | 128           | 0.5                         | 1.0          | 0.9          |
| Ornithosis                              | 85            | 176           | 85            | 0.7                         | 1.5          | 0.7          |
| Pertussis                               | 5 633         | 4 297         | 4 389         | 31.6                        | 23.8         | 24           |
| Plague                                  | —             | —             | —             | 0                           | 0            | 0            |
| Poliomyelitis                           | —             | —             | —             | 0                           | 0            | 0            |
| Q fever                                 | 667           | 473           | 555           | 3.7                         | 2.6          | 3.0          |
| Rabies                                  | —             | —             | —             | 0                           | 0            | 0            |
| Ross River virus infection              | 3 974         | 2 602         | 7 823         | 22.9                        | 14.4         | 42.7         |
| Rubella                                 | 3 315         | 4 380         | 2 845         | 18.6                        | 24.3         | 15.5         |
| Salmonellosis(b)                        | 5 283         | 5 895         | 5 819         | 29.6                        | 32.7         | 31.8         |
| Shigellosis                             | 724           | 734           | 676           | 6.1                         | 6.1          | 5.6          |
| Syphilis                                | 2 324         | 1 854         | 1 523         | 13                          | 10.3         | 8.3          |
| Tetanus                                 | 15            | 7             | 2             | 0.1                         | 0            | 0            |
| Tuberculosis                            | 1 024         | 1 073         | 1 067         | 5.7                         | 5.9          | 5.8          |
| Typhoid                                 | 50            | 69            | 84            | 0.3                         | 0.4          | 0.5          |
| Viral haemorrhagic fever(b)             | —             | —             | —             | 0                           | 0            | 0            |
| Yellow fever                            | —             | —             | —             | 0                           | 0            | 0            |
| Yersiniosis(b)                          | 414           | 306           | 268           | 3.5                         | 2.6          | 2.2          |
| <b>Total</b>                            | <b>61 726</b> | <b>58 074</b> | <b>65 382</b> | <b>345.9</b>                | <b>321.7</b> | <b>357.1</b> |

(a) Not all diseases were notifiable in every State and Territory every year. (b) Not elsewhere classified. (c) Botulism and mumps notifications have been collated nationally only since 1992.

Source: *Communicable Diseases Intelligence*, Vol. 21, No. 20, October 1997.

**9.15 NEWLY DIAGNOSED HIV CASES(a), AIDS Cases and Deaths Following Diagnosis**

|             | Year of diagnosis |       |       |       |       |       |       |      |      |      | Total(b) |
|-------------|-------------------|-------|-------|-------|-------|-------|-------|------|------|------|----------|
|             | Prior to 1988     | 1988  | 1989  | 1990  | 1991  | 1992  | 1993  | 1994 | 1995 | 1996 |          |
|             | no.               | no.   | no.   | no.   | no.   | no.   | no.   | no.  | no.  | no.  |          |
| HIV cases   | 9 351             | 1 703 | 1 599 | 1 388 | 1 401 | 1 163 | 1 026 | 954  | 847  | 853  | 20 299   |
| AIDS cases  | 797               | 536   | 614   | 673   | 801   | 789   | 836   | 933  | 762  | 555  | 7 296    |
| AIDS deaths | 767               | 498   | 572   | 597   | 704   | 654   | 615   | 519  | 246  | 88   | 5 260    |

(a) Not adjusted for multiple reporting. (b) Includes 14 cases for which the date of HIV diagnosis was not known.

Source: *HIV/AIDS and Related Diseases in Australia, Annual Surveillance Report 1997*, National Centre in HIV Epidemiology and Clinical Research.

**9.16 CHARACTERISTICS OF CASES OF NEWLY DIAGNOSED HIV INFECTION(a), Number of Cases and Per cent of Total Cases**

|                                                         | Unit       | Year of HIV diagnosis |              |              |              |              |              |              |            |            |            | Total(b)      |
|---------------------------------------------------------|------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|------------|------------|---------------|
|                                                         |            | Prior to 1988         | 1988         | 1989         | 1990         | 1991         | 1992         | 1993         | 1994       | 1995       | 1996       |               |
|                                                         |            | no.                   | no.          | no.          | no.          | no.          | no.          | no.          | no.        | no.        | no.        |               |
| <b>Total cases</b>                                      | <b>no.</b> | <b>9 351</b>          | <b>1 703</b> | <b>1 599</b> | <b>1 388</b> | <b>1 401</b> | <b>1 163</b> | <b>1 026</b> | <b>954</b> | <b>847</b> | <b>853</b> | <b>20 299</b> |
| Males(c)                                                | %          | 96.7                  | 95.4         | 94.5         | 93.5         | 94.9         | 92.2         | 93.0         | 91.1       | 91.2       | 92.2       | 95            |
| State/Territory                                         |            |                       |              |              |              |              |              |              |            |            |            |               |
| New South Wales                                         | %          | 72.6                  | 67.8         | 58.8         | 56.7         | 54.2         | 51.3         | 45.2         | 51.3       | 45.2       | 52.9       | 63.5          |
| Victoria                                                | %          | 15.3                  | 17.0         | 20.3         | 22.1         | 22.1         | 22.3         | 22.2         | 23.0       | 19.9       | 21.9       | 18.3          |
| Queensland                                              | %          | 5.0                   | 7.2          | 10.2         | 10.6         | 11.4         | 13.4         | 14.3         | 18.2       | 14.0       | 19.0       | 8.9           |
| South Australia                                         | %          | 2.2                   | 2.8          | 4.5          | 4.7          | 3.3          | 2.9          | 5.5          | 3.7        | 3.7        | 5.0        | 3.2           |
| Western Australia                                       | %          | 3.4                   | 4.2          | 4.1          | 5.0          | 5.1          | 4.5          | 4.7          | 7.5        | 6.7        | 5.9        | 4.3           |
| Tasmania                                                | %          | 0.1                   | 0.1          | 1.0          | 0.6          | 0.4          | 0.8          | 0.4          | 0.2        | 0.7        | 0.4        | 0.4           |
| Northern Territory                                      | %          | 0.4                   | 0.2          | 0.3          | 0.6          | 0.4          | 0.5          | 1.0          | 0.7        | 0.1        | 0.6        | 0.4           |
| Australian Capital Territory                            | %          | 0.9                   | 0.7          | 0.8          | 1.1          | 0.6          | 1.4          | 0.6          | 1.5        | 2.0        | 0.9        | 1.0           |
| Exposure category(d)                                    |            |                       |              |              |              |              |              |              |            |            |            |               |
| Male homosexual/bisexual contact                        | %          | 83.2                  | 82.9         | 81.5         | 78.8         | 78.7         | 74.7         | 77.0         | 73.9       | 73.0       | 76.5       | 79.7          |
| Male homosexual/bisexual contact and injecting drug use | %          | 2.8                   | 2.1          | 3.0          | 3.4          | 2.7          | 4.0          | 3.6          | 5.6        | 4.6        | 3.0        | 3.2           |
| Injecting drug use(e)                                   | %          | 3.6                   | 6.9          | 6.2          | 6.4          | 5.3          | 5.5          | 3.8          | 3.3        | 4.3        | 3.0        | 4.7           |
| Heterosexual contact                                    | %          | 2.1                   | 5.3          | 6.9          | 9.4          | 11.0         | 13.7         | 14.5         | 15.0       | 16.6       | 16.4       | 8.1           |
| Haemophilia/coagulation disorder                        | %          | 5.6                   | 1.2          | 0.3          | 0.3          | 0.5          | 0.4          | 0.0          | 0.1        | 0.1        | 0.0        | 2.2           |
| Receipt of blood/tissue                                 | %          | 2.6                   | 1.5          | 1.5          | 1.6          | 1.2          | 1.3          | 0.7          | 1.0        | 0.4        | 0.4        | 1.6           |
| Mother with/at risk for HIV infection                   | %          | 0.1                   | 0.1          | 0.4          | 0.1          | 0.6          | 0.4          | 0.4          | 1.1        | 0.9        | 0.7        | 0.4           |
| Other/undetermined                                      | %          | 48.0                  | 23.0         | 25.8         | 29.0         | 26.7         | 13.8         | 11.8         | 6.8        | 7.7        | 13.7       | 32.4          |

(a) Not adjusted for multiple reporting. (b) Total includes 14 cases for which the date of HIV diagnosis was unknown. (c) Proportion of males among people whose sex was reported. (d) The 'Other/undetermined' category was excluded from the calculation of the percentage of cases attributed to each HIV exposure category. (e) Excludes males who also reported a history of homosexual/bisexual contact.

Source: *HIV/AIDS and Related Diseases in Australia, Annual Surveillance Report 1997*, National Centre in HIV Epidemiology and Clinical Research.

## Dental health

According to the 1996 National Dental Telephone Interview Survey, an estimated 9.7 million people aged five years and over had a dental consultation in the 12 months prior to survey interview. The most common types of treatment or service received were teeth cleaned and scaled (66%) and teeth filled (41%).

Males (44%) were more likely than females (39%) to have had teeth filled. The type

of treatment or service provided varied with age. Those aged 5 to 24 years were less likely to have teeth filled than older age groups (table 9.17).

Edentulism (no natural teeth) is most prevalent among older adults. However, it has decreased markedly in all age cohorts, particularly among middle-aged adults. For example, for those aged 55–64 years the prevalence of edentulism has decreased from 40% in 1979 to 20% in 1996 (table 9.18).

**9.17 DENTAL CONSULTATION, Persons Aged 5 Years and Over(a) — 1996**

| Age group (years) | Unit | Treatment/service        |                       |                             |                    | Total who had a dental consultation(c) |
|-------------------|------|--------------------------|-----------------------|-----------------------------|--------------------|----------------------------------------|
|                   |      | Tooth/teeth extracted(b) | Tooth/teeth filled(b) | Teeth cleaned and scaled(b) | Other treatment(b) |                                        |
| 5–14              | %    | 8.4                      | 27.1                  | 50.9                        | 19.7               | 81.8                                   |
| 15–24             | %    | 14.1                     | 28.5                  | 68.3                        | 23.6               | 55.5                                   |
| 25–44             | %    | 14.1                     | 48.0                  | 72.2                        | 22.1               | 53.6                                   |
| 45–64             | %    | 12.5                     | 52.2                  | 70.3                        | 27.9               | 58.0                                   |
| 65–74             | %    | 12.0                     | 50.8                  | 61.3                        | 27.6               | 47.4                                   |
| 75 and over       | %    | 11.1                     | 45.9                  | 64.0                        | 24.0               | 40.7                                   |
| Males             | %    | 13.2                     | 44.2                  | 63.7                        | 22.5               | 55.2                                   |
| Females           | %    | 11.4                     | 38.9                  | 67.3                        | 24.5               | 60.7                                   |
| Persons           |      |                          |                       |                             |                    |                                        |
| Proportion        | %    | 12.2                     | 41.4                  | 65.6                        | 23.5               | 58.0                                   |
| Number            | '000 | 1 186.2                  | 4 025.3               | 6 378.2                     | 2 284.9            | 9 722.9                                |

(a) In the 12 months prior to the interview. (b) Percentages of people receiving treatments or services among people who had a dental consultation in the 12 months prior to the interview. (c) Each person may have reported more than one type of treatment or service and therefore components do not add to totals.

Source: 1996 National Dental Telephone Interview Survey, Australian Institute of Health and Welfare, Dental Statistics and Research Unit.

**9.18 PREVALENCE OF TOOTH LOSS**

|                                 | Unit | Age group (years) |       |       |       |       |       |             |
|---------------------------------|------|-------------------|-------|-------|-------|-------|-------|-------------|
|                                 |      | 15–24             | 25–34 | 35–44 | 45–54 | 55–64 | 65–74 | 75 and over |
| Edentulous(a)                   |      |                   |       |       |       |       |       |             |
| 1979                            | %    | 1.3               | 5.4   | 14.0  | 26.5  | 40.2  | 60.7  | 78.6        |
| 1989–90                         | %    | 0.6               | 1.4   | 5.7   | 14.9  | 28.9  | 43.2  | 63.4        |
| 1994                            | %    | 0.1               | 0.5   | 4.0   | 10.9  | 20.6  | 32.5  | 52.2        |
| 1996                            | %    | 0.1               | 0.6   | 2.0   | 8.1   | 19.9  | 32.7  | 48.7        |
| Mean number of missing teeth(b) |      |                   |       |       |       |       |       |             |
| 1994                            | no.  | 1.8               | 2.6   | 4.3   | 7.1   | 9.7   | 12.5  | 15.4        |
| 1996                            | no.  | 2.0               | 2.6   | 4.2   | 6.2   | 8.7   | 11.9  | 14.7        |

(a) Percentage of persons edentulous (i.e. having no natural teeth). (b) Mean number of missing teeth in dentate persons.

Source: 1979 Special Supplementary Survey; 1989–90 National Health Survey, Health Related Actions, Australia (4375.0); 1994 National Dental Telephone Interview Survey, Australian Institute of Health and Welfare, Dental Statistics and Research Unit; 1996 National Dental Telephone Interview Survey, Australian Institute of Health and Welfare, Dental Statistics and Research Unit.

**9.19 PERSONS WHO HAD DENTURES OR FALSE TEETH, Aged 18 Years and Over — 1996**

|                   | Unit | Has dentures or false teeth |          |                                    | Does not have dentures or false teeth | Total    |
|-------------------|------|-----------------------------|----------|------------------------------------|---------------------------------------|----------|
|                   |      | Full sets in both jaws      | Other(a) | Total with dentures or false teeth |                                       |          |
| Age group (years) |      |                             |          |                                    |                                       |          |
| 18–24             | %    | 0.0                         | 2.1      | 2.1                                | 97.9                                  | 100.0    |
| 25–34             | %    | 0.6                         | 4.3      | 4.9                                | 95.1                                  | 100.0    |
| 35–44             | %    | 2.0                         | 14.0     | 16.0                               | 84.0                                  | 100.0    |
| 45–54             | %    | 7.8                         | 26.1     | 33.9                               | 66.1                                  | 100.0    |
| 55–64             | %    | 19.2                        | 33.7     | 52.9                               | 47.1                                  | 100.0    |
| 65–74             | %    | 32.2                        | 37.8     | 70.0                               | 30.0                                  | 100.0    |
| 75 and over       | %    | 45.9                        | 37.2     | 83.1                               | 16.9                                  | 100.0    |
| Males             | %    | 6.9                         | 17.9     | 24.8                               | 75.2                                  | 100.0    |
| Females           | %    | 12.5                        | 18.2     | 30.7                               | 69.3                                  | 100.0    |
| Persons           |      |                             |          |                                    |                                       |          |
| Proportion        | %    | 9.8                         | 18.1     | 27.9                               | 72.1                                  | 100.0    |
| Number            | '000 | 1 316.5                     | 2 431.5  | 3 748.0                            | 9 685.7                               | 13 433.7 |

(a) Includes those who have a full set in upper or lower jaw, and those who have partial sets in either or both jaws.

Source: 1996 National Dental Telephone Interview Survey, Australian Institute of Health and Welfare, Dental Statistics and Research Unit.

In 1996, about 3.7 million people (28%) aged 18 years and over had dentures or false teeth, and 10% had full sets in both jaws.

Females (31%) were more likely than males (25%) to report having dentures or false teeth, and the likelihood of having dentures or false teeth increased markedly with age, with 83% of persons aged 75 years and over having false teeth (table 9.19).

## Health lifestyles and risk factors

### Diet and nutrition

The need for national information about diet and nutrition has been recognised in many forums. This need is being addressed through the National Nutrition Survey, a joint project between the Australian Bureau of Statistics and the Department of Health and Family Services, in association with other health agencies.

Results from the National Nutrition Survey will provide information on food and nutrient intake, physical measures, and dietary habits and attitudes. These results will contribute to the development and monitoring of health goals and

targets for nutrition and diet-related disease, as well as assist with the development of food policy and regulations associated with food safety and composition.

### Breastfeeding

In the 1996–97 Budget, the Commonwealth Government allocated \$1 million per year for two years for initiatives aimed at increasing the numbers of Australian women breastfeeding their babies. The funding will be spent on community education, improving support systems for breastfeeding and the monitoring of breastfeeding trends.

Results from the 1995 National Health Survey showed that 86% of children under four years of age were breastfed for some period of time. The proportions of babies who were currently being breastfed declined from 65% of all those less than two months of age, to around 50% at six months, to less than 10% of those over one year. The average time of being exclusively breastfed was 16 weeks, with solid food most commonly introduced between 17 and 28 weeks. Only 8% of breastfed children were exclusively breastfed for longer than 28 weeks.

## Folate

In the 1996–97 budget the Commonwealth Government allocated \$200,000 per year for two years to encourage women of childbearing age to increase their consumption of folate, either from foods or dietary supplements. The consumption of recommended intakes of folate, a B group vitamin, by women just prior to and in the early stages of pregnancy has been shown to prevent a significant number of babies being born with a defect of the neural tube, such as spina bifida.

## Overweight and obesity

Overweight and obesity are risk factors for many health conditions, including ischaemic heart disease, cerebrovascular disease, hypertension, diabetes mellitus, cancer, respiratory and musculoskeletal conditions.

Based on self-reported height and weight, results from surveys in 1989–90 and 1995 show that the proportion of adults who were overweight or obese has declined. Prevalence of overweight or obesity was higher for males and increased with age (table 9.20).

**9.20 PERSONS WHO WERE OVERWEIGHT(a) OR OBESSE, 18 Years and Over**

|                   | 1989–90     | 1995        |
|-------------------|-------------|-------------|
|                   | %           | %           |
| Sex               |             |             |
| Males             | 44.7        | 52.0        |
| Females           | 31.0        | 36.8        |
| Age               |             |             |
| 18–34 years       | 27.1        | 33.9        |
| 35–54 years       | 43.9        | 49.9        |
| 55 years and over | 45.0        | 50.7        |
| <b>Total</b>      | <b>36.5</b> | <b>44.5</b> |

(a) Excludes body mass not stated.

Source: 1989–90 and 1995 National Health Surveys.

## Physical activity

Regular physical activity is important in the prevention of many health conditions, including ischaemic heart disease, hypertension, diabetes, osteoporosis and obesity. It also provides health benefits associated with improved self esteem.

About two-thirds of the adult population exercised for recreation, sport or fitness in both 1995 and 1989–90 (table 9.21). However, less than half of those who exercised (48%) did so at medium or high exercise levels (based on the

frequency, intensity and duration of exercise they had undertaken).

While the proportions of males and females who exercised were similar, males exercised at higher levels. Young adults were more likely to exercise and at higher levels compared to older adults.

**9.21 ADULTS WHO EXERCISE**

|                   | 1989–90     | 1995        |
|-------------------|-------------|-------------|
|                   | %           | %           |
| Sex               |             |             |
| Males             | 64.6        | 66.4        |
| Females           | 63.8        | 65.6        |
| Age               |             |             |
| 18–34 years       | 70.9        | 72.1        |
| 35–54 years       | 60.9        | 65.1        |
| 55 years and over | 59.1        | 59.3        |
| <b>Total</b>      | <b>64.2</b> | <b>66.0</b> |

Source: 1989–90 and 1995 National Health Surveys.

## Drug use

### Use of tobacco and alcohol

Tobacco smoking is a risk factor for heart disease, cerebrovascular disease, peripheral vascular disease, chronic lung disease and cancer of the lung and other organs.

In 1995, 24% of adults (about 3.2 million persons) were smokers (table 9.22). Although the proportion of adults who smoke has declined, most of this decline is attributable to smokers giving up smoking; the proportion taking up smoking has declined only slightly since the late 1970s. Prevalence of smoking was higher for males and declined with age.

**9.22 ADULTS WHO SMOKE**

|                   | 1989–90     | 1994–95     |
|-------------------|-------------|-------------|
|                   | %           | %           |
| Sex               |             |             |
| Males             | 32.1        | 27.3        |
| Females           | 24.7        | 20.3        |
| Age               |             |             |
| 18–34 years       | 35.3        | 30.8        |
| 35–54 years       | 28.9        | 23.9        |
| 55 years and over | 17.9        | 14.4        |
| <b>Total</b>      | <b>28.4</b> | <b>23.7</b> |

Source: 1989–90 and 1995 National Health Surveys.

High levels of alcohol consumption have been linked to an increased risk of heart disease, cerebrovascular disease, neurological disease, liver disease, pancreatic disease and cancer of the liver and other organs. Alcohol has been identified as a major contributing factor to traffic accidents.

In 1995, 8% of adults drank alcohol at levels considered by the National Health and Medical Research Council to pose a moderate or high risk to their health (table 9.23). This percentage has decreased since 1989–90, when 11% of adults drank at these levels. Prevalence of moderate to high alcohol risk level was higher for males and declined with age.

**9.23 ADULTS WHO DRINK AT MODERATE OR HIGH RISK LEVELS**

|                   | 1989–90     | 1995       |
|-------------------|-------------|------------|
|                   | %           | %          |
| Sex               |             |            |
| Males             | 14.9        | 10.6       |
| Females           | 7.5         | 6.1        |
| Age               |             |            |
| 18–34 years       | 13.0        | 9.2        |
| 35–54 years       | 11.7        | 8.8        |
| 55 years and over | 7.7         | 6.4        |
| <b>Total</b>      | <b>11.1</b> | <b>8.3</b> |

Source: 1989–90 and 1995 National Health Surveys.

## Use of illicit drugs

The 1995 National Drug Strategy Household Survey found that, of persons aged 14 years and over, 31% of respondents were most likely to

have ever tried marijuana/hash followed by amphetamines (6% of respondents). In the 12 months prior to the survey, marijuana/hash had been used by about 13%, amphetamines by 2% and each of the following drugs by less than 1% of respondents: cocaine/crack; hallucinogens; inhalants; ecstasy/designer drugs and injected drugs.

When asked what drugs they thought of when people spoke about a drug problem, marijuana was cited by 31% of respondents, heroin by 28%, alcohol by 13%, tobacco by 5% and cocaine by 4%.

## Use of medication

In the 1995 National Health Survey, use of medication was the most common action people took for their health, either as a preventive health measure or as treatment for illness. Overall, 69% of the population (12.4 million people) were taking some form of medication. More females than males took medications (74% of females compared to 63% of males), with rates for females outweighing those for males for each type of medication. A majority (54%) of young children less than five years of age also used medication in the two weeks prior to interview.

Apart from vitamins and minerals, the most commonly used medications were analgesics (pain relievers) which were used by 24% of the population. Analgesic use was much more prevalent in females than males and peaked around 35–44 years of age. Medication use for the treatment of cardiac/hypertensive disease and arthritis increased with age; medication use for the treatment of coughs and colds declined with age (table 9.24).

**9.24 USE OF MEDICATIONS, By Age — 1995**

|                                    | Less than 15 | 15–34 | 35–54 | 55 or more |
|------------------------------------|--------------|-------|-------|------------|
| Type of medication                 | %            | %     | %     | %          |
| Pain relievers                     | 13.9         | 27.1  | 29.3  | 20.9       |
| Medicines for heart/blood pressure | 0.1          | 0.7   | 7.9   | 43.3       |
| Skin ointments or creams           | 8            | 11.8  | 10.2  | 7.9        |
| Medications for coughs or colds    | 11.4         | 7.4   | 5.7   | 4          |
| Asthma medications                 | 8.2          | 6.7   | 5.5   | 6.4        |
| Vitamins or minerals               | 16.2         | 26.7  | 30.8  | 27.7       |
| Natural or herbal medications      | 5.3          | 7.9   | 12.9  | 12.8       |

Source: 1995 National Health Survey.

## 9.25 MOST COMMONLY USED PRESCRIPTION DRUGS, 1996

| Drug                                                              | Description                                             | No. of prescriptions |
|-------------------------------------------------------------------|---------------------------------------------------------|----------------------|
| Amoxycillin                                                       | Antibiotic                                              | 5 517 437            |
| Paracetamol(a)                                                    | Pain relief                                             | 4 775 395            |
| Salbutamol(b)                                                     | Used in the management of asthma                        | 4 613 831            |
| Codeine with paracetamol (20 mg or more of codeine per dose unit) | Pain relief                                             | 3 962 918            |
| Enalapril                                                         | Used in the management of high blood pressure           | 3 286 007            |
| Ranitidine                                                        | Used in the treatment of duodenal and gastric ulcers    | 3 345 707            |
| Temazepam                                                         | Sedative commonly used in the treatment of insomnia     | 3 293 596            |
| Atenolol                                                          | Used primarily in the management of high blood pressure | 2 926 155            |
| Simvastatin                                                       | Cholesterol-lowering drug                               | 3 420 355            |

(a) This drug is available without a prescription; therefore the number of prescriptions for this drug understates actual community use. (b) Includes an estimate of over the counter use in those States where it is an S3 recordable drug.

Source: Department of Health and Family Services, Drug Utilisation Sub-Committee (DUSC) database, 1996.

The Drug Utilisation Sub-Committee (DUSC), which maintains a database that estimates community use of prescription drugs in Australia, reports that 178 million prescriptions were dispensed in 1996. Of the ten most commonly used prescription drugs in the community, two were antibiotics, two were analgesics, and two were used in the management of hypertension. Other commonly prescribed types of medication were for the treatment of asthma, the management of duodenal and gastric ulcers, insomnia/anxiety and a cholesterol-lowering drug (table 9.25).

### Children's immunisation

Immunisation coverage goals for Australia for the year 2000, recommended by the National Health and Medical Research Council (NH&MRC), call for 90% or more coverage of children at two years of age, and near universal coverage of children at school-entry age, against Diphtheria, Tetanus, Pertussis (Whooping Cough), Poliomyelitis, Measles, Mumps, Rubella and Hib (*Haemophilus influenzae* type b).

A national survey conducted by the ABS in April 1995 collected information about the coverage and practices associated with the immunisation of children against those diseases. Immunisation levels were calculated using the NH&MRC's current Standard Childhood Vaccination Schedule (August 1994). To be considered fully immunised against a particular condition, a child must have received the specified number of

vaccinations against that disease appropriate for his/her age. To be classified as fully immunised against all conditions, a child must have received the specified number of vaccinations against all conditions listed on the recommended vaccination schedule appropriate for his/her age. The majority of information collected related to children aged three months to six years.

For most conditions, the proportion of children fully immunised declined sharply with age, from high levels at infancy (table 9.26). In part this reflected a failure to obtain the follow-up/booster vaccinations as recommended in the schedule, and in part it reflected recent changes to the schedule. In particular, the relatively low proportions of children fully immunised against Hib may reflect its recent inclusion in the recommended schedule.

The Australian Childhood Immunisation Register, which commenced operation on 1 January 1996, is administered by the Health Insurance Commission for the Commonwealth Department of Health and Family Services. The register records details of immunisations given to children under seven years of age. All children under seven years enrolled in Medicare are included in the register. Children not enrolled in Medicare are added to the register when a doctor or clinic sends details of an immunisation to the Health Insurance Commission. Statistical reports will be available from the register when sufficient data accumulate.



**9.26 FULLY IMMUNISED CHILDREN, 3 MONTHS TO 6 YEARS, Condition by Age — April 1995**

|                        | Diphtheria/Tetanus | Pertussis | Polio | Measles | Mumps | Rubella | Hib  |
|------------------------|--------------------|-----------|-------|---------|-------|---------|------|
|                        | %                  | %         | %     | %       | %     | %       | %    |
| 3–6 months             | 92.5               | 92.0      | 92.0  | —       | —     | —       | 76.3 |
| Total less than 1 year | 84.0               | 82.7      | 83.1  | —       | —     | —       | 55.4 |
| 1 year                 | 88.5               | 86.2      | 86.3  | 85.5    | 84.7  | 79.6    | 62.3 |
| 2 years                | 63.0               | 57.5      | 86.9  | 91.4    | 90.1  | 81.1    | 52.4 |
| 3 years                | 61.5               | 55.6      | 87.9  | 92.8    | 90.7  | 79.7    | 54.7 |
| 4 years                | 64.5               | 57.4      | 86.9  | 93.9    | 90.7  | 77.6    | 57.8 |
| 5 years                | 77.3               | 68.4      | 86.5  | 93.7    | 92.2  | 72.5    | 43.2 |
| 6 years                | 45.2               | 17.2      | 60.2  | 91.7    | 88.4  | 62.8    | 26.6 |

Source: *Children's Immunisation, Australia (4352.0)*.

**9.27 CHILDREN AGED 0–14 YEARS, Type of Test by Age — April 1995**

|                                                              | Less than<br>2 years | 2–4 years | 5–9 years | 10–14<br>years | Total |
|--------------------------------------------------------------|----------------------|-----------|-----------|----------------|-------|
|                                                              | %                    | %         | %         | %              | %     |
| Whether has ever had sight and/or hearing tests              |                      |           |           |                |       |
| Both sight and hearing tests                                 | 28.4                 | 33.7      | 63.1      | 63.1           | 52.6  |
| Sight tests only                                             | 4.9                  | 4.7       | 9.1       | 16.2           | 10.0  |
| Hearing tests only                                           | 17.3                 | 22.6      | 12.0      | 7.5            | 13.3  |
| Neither sight nor hearing                                    | 48.7                 | 38.2      | 14.9      | 11.8           | 23.1  |
| Other(a)                                                     | 0.7                  | 0.9       | 0.9       | 1.4            | 1.0   |
| Whether has ever visited a dentist or dental professional(b) |                      |           |           |                |       |
| Has visited                                                  | ..                   | 22.5      | 85.1      | 96.6           | 75.0  |
| Has not visited                                              | ..                   | 77.3      | 14.7      | 3.3            | 24.8  |
| Not known                                                    | ..                   | *0.2      | 0.2       | *0.1           | 0.2   |

(a) Includes not known if tested, and type of test not stated. (b) Data relating to dental visits refer to children aged 2–14 years.

Source: *Children's Health Screening, Australia (4337.0)*.

## Health screening

Screening programs for breast and cervical cancer are discussed in the section on National Health Priority Areas, *Cancer control*.

### Children's health screening

Screening of children for particular disorders is important as early detection may enable preventive measures to be taken to stop or slow further development of a problem, or facilitate early intervention to minimise the effects of a disorder. A national survey conducted by the Australian Bureau of Statistics in April 1995 identified the levels and patterns of testing of sight and hearing, consultations with dental professionals and visits to baby health clinics.

Of children aged 0–15 years, 63% had their sight tested and 66% had their hearing tested at some time in their lives. Of children aged 2–14 years, 75% had visited a dental professional (table 9.27).

For children aged 0–3 years, a large proportion of health screening procedures are undertaken at baby health clinics (centres). The National

Health and Medical Research Council recommends checks at 6–8 weeks, 4 months, 6 months and 12–18 months.

About 90% of children aged 0–3 years had visited a baby health clinic at some stage in their life, the majority (69%) had visited prior to age 4 weeks. 'Check-up' was the most commonly reported reason for visiting a baby health clinic (90%). For those children who had never visited a baby health clinic, the more commonly reported reasons for not doing so were 'no perceived need' (39%) and 'use of other services' (30%).

### Family planning

The Commonwealth Government provides direct ongoing funding through the Family Planning Program to selected non-government organisations with the aim of providing a comprehensive range of information, education, professional training, counselling and clinical services in sexual and reproductive health to the Australian community. The allocation for 1996–97 was about \$14 million.

In the 1995 National Health Survey, 44% of women aged 18–49 reported using a contraceptive method (including methods used by their partner). The most common method was the oral contraceptive pill. Almost one quarter of women in this age group reported that they or their partner had been sterilised or were otherwise infertile.

## Health service delivery

### Hospitals

#### Public hospitals

In 1995–96 there were 705 public acute care and Department of Veterans Affairs (DVA) hospitals, 48 public psychiatric<sup>6</sup> hospitals, 203 government nursing homes and 124 government hostels. In the previous financial year the corresponding figures were 729, 22, 202, and 114.

In 1995–96, the public sector provided 62% of hospital facilities comprising 72% of total hospital beds. These facilities accounted for 68% of total separations, 74% of total bed days and 65% of same day separations (table 9.28).

Excluding beds in public psychiatric hospitals, there were 3.0 hospital beds available for acute care per 1,000 population in Australia in 1995–96, a slight decline from 3.1 beds per 1,000 in the previous year. This continued the decline in available beds over the decade from 4.1 beds per 1,000 population in 1985–86.

The number of beds available in public psychiatric hospitals in Australia decreased from 2.3 per 1,000 population in 1970 to 0.2 in 1994–95, but increased slightly to 0.3 in 1995–96. During the 1970s and early 1980s, the supply contracted by 6% per year. Between 1985–86 and 1987–88, the annual rate of decrease was almost 20%. This rapid reduction in beds resulted from moves to deinstitutionalise patients requiring acute or long-term psychiatric care. Since 1987–88, the reduction in bed supply continued at about 2% per year until 1994–95.

Rates of separation for public acute hospitals have increased steadily over recent years, rising from 167.7 per 1,000 in 1991–92 to 196.7 per 1,000 population in 1995–96. During the same period, the average length of stay fell from

5.2 to 4.6 days. This decline in length of stay in part reflects increasing same-day separations, which accounted for 40% of all public acute hospital separations in 1995–96.

#### Private hospitals

Through the ABS Private Health Establishments Collection, information on facilities, patients, staffing and finances was collected from the 323 private acute and psychiatric hospitals and 140 free-standing day hospital facilities which were in operation throughout Australia during 1995–96.

The average number of beds available at private acute and psychiatric hospitals for admitted patients increased by 10% to 22,757 between 1991–92 and 1995–96. There were 1.3 private hospital beds available per 1,000 population in 1995–96. The average number of beds or chairs at free-standing day hospital facilities (used mainly for short post-operative recovery periods) increased over the same period by 84% to 1,023. This large increase reflects the substantial growth in the numbers of free-standing day hospitals in recent years.

Private hospital separations in 1995–96 totalled 1.7 million, of which 87% were from private acute and psychiatric hospitals and 13% from free-standing day hospital facilities. Same day separations accounted for 50% of all private hospital separations (compared to 40% of public hospital separations), which contributed to the lower average length of stay in private sector hospitals (4.0 days compared to 4.8 days).

The number of full-time equivalent staff engaged at all private hospitals was 39,990, of whom 59% were nursing staff.

Total operating expenditure for private acute and psychiatric hospitals during 1995–96 amounted to \$2,824 million, of which 58% was spent on salaries and wages (including on-costs). Revenue received during the year was \$3,084 million, of which 94% was received as payments from or in respect of patients. Total operating expenditure for free-standing day hospital facilities during 1995–96 amounted to \$80.2 million and revenue received during the year was \$99.3 million.

**9.28 PUBLIC ACUTE, PRIVATE ACUTE AND PSYCHIATRIC HOSPITALS, 1995–96**

|                                                           | Unit | Public | Private(a) | Total(a) |
|-----------------------------------------------------------|------|--------|------------|----------|
| Bed supply                                                |      |        |            |          |
| Facilities                                                | no.  | 753    | 463        | 1 219    |
| Beds/chairs                                               | no.  | 59 720 | (b)23 780  | 83 500   |
| Activity                                                  |      |        |            |          |
| Total separations                                         | '000 | 3 598  | 1 661      | 5 259    |
| Same day separations                                      | '000 | 1 420  | 772        | 2 192    |
| Total patient days                                        | '000 | 17 391 | 6 053      | 23 444   |
| Average length of stay                                    | days | 4.8    | (c)4.0     | (c)4.6   |
| Average length of stay excluding all same-day separations | days | 7.3    | 6.1        | 6.6      |
| Average occupancy rate                                    | %    | 80.0   | (c)70.0    | (c)77.0  |
| Total non-admitted services                               | '000 | 46 384 | 1 351      | 47 737   |

(a) Includes free-standing day hospital facilities. (b) Annual average total beds/chairs. (c) Excludes free-standing day hospital facilities.

Source: *Private Hospitals, Australia, 1995–96* (4390.0); *Australian Hospital Statistics, 1995–96*, Australian Institute of Health and Welfare.

**Other health services**

In addition to hospital services, most medical services in Australia are delivered by private medical practitioners on a fee-for-service basis or by medical practitioners employed in community health centres. Two surveys of the private medical practice industry were conducted by the ABS in respect of the 1994–95 financial year. Information from these surveys about medical practitioners who work in private practice in Australia is contained in *Chapter 21, Service industries*.

In the 1995 National Health Survey, 23% of the population (4.2 million people) consulted a

medical practitioner during the two weeks prior to interview. General medical practitioners were the most frequently consulted health practitioners, followed by dentists (table 9.29). For each type of health practitioner, female consultation rates outweighed those for males.

Contacts with other community based health services such as health and community centres and ambulance services were comparatively low, being reported by an estimated 15,800 and 5,700 persons respectively (or less than 0.1% of the population). Family/friends and self-help groups were contacted for health information or advice by about 4% of the population.

**9.29 CONSULTATIONS WITH HEALTH PRACTITIONERS, 1995**

|                                   | Males | Females | Persons | Persons |
|-----------------------------------|-------|---------|---------|---------|
| Type of practitioner              | %     | %       | %       | '000    |
| Doctors                           |       |         |         |         |
| General medical practitioners     | 18.5  | 23.5    | 21.0    | 3 792.8 |
| Specialist medical practitioners  | 3.5   | 4.7     | 4.1     | 739.2   |
| Total(a)                          | 20.4  | 26.1    | 23.3    | 4 206.6 |
| Dentists(b)                       | 5.4   | 6.0     | 5.6     | 1 006.1 |
| Allied health practitioners(c)(d) | 7.6   | 10.5    | 8.1     | 1 465.7 |
| Other health practitioners(d)(e)  | 2.2   | 3.7     | 2.9     | 531.6   |

(a) Persons may have reported more than one type of practitioner; therefore components do not add to totals. (b) Persons aged 2 years and over. (c) Includes audiology/audiometrist, chemist, chiropodist/podiatrist, dietitian/nutritionist, nurse, optician/optometrist, occupational therapist, physiotherapist/hydrotherapist, psychologist, social worker/welfare officer, speech therapist/pathologist. (d) Each practitioner was consulted by less than 2.5% of the population during the two weeks prior to interview. (e) Includes acupuncturist, chiropractor, herbalist, hypnotherapist, naturopath, osteopath.

Source: 1995 National Health Survey.

## Health workforce

According to Australian Bureau of Statistics labour force estimates, in 1996–97 about 280,900 people were employed in health occupations in Australia, comprising about 3.4% of the total number of employed persons (table 9.30). The largest component of the health workforce was registered nurses (145,300) followed by medical practitioners (35,100 general medical practitioners and 16,500 specialist medical practitioners).

Males predominated in medical practice (68% of general medical practitioners and 76% of specialist medical practitioners). In contrast, females predominated in nursing (93% of registered nurses) and most allied health occupations (for example, 89% of occupational therapists, 84% of speech pathologists, 81% of physiotherapists).

## Health care financing

### Total health expenditure

Total expenditure on health services (both public and private sectors) in 1995–96 was just under \$42 billion or \$2,300 per person. Health expenditure in constant prices grew at an average rate of 3.8% between 1989–90 and 1995–96 (table 9.31). Health expenditure as a

proportion of Gross Domestic Product (GDP) was estimated to be 8.5% in 1995–96.

### Commonwealth government funding of hospitals

In 1996–97 the Commonwealth contributed \$4.8 billion in public hospital funding under the Medicare Agreements to the States through the Hospital Funding Grants.

Of this amount, \$3.9 billion included payments to the States as Base Hospital Funding Grants for the provision of public hospital services. A further \$687 million was allocated to the States for bonus payments which are linked, in part, to the level of public activity as an indicator of effectiveness in the delivery of public hospital services.

An additional \$21 million was allocated for projects to encourage more effective use of hospital resources and to develop cost-based funding and management systems, with \$45 million allocated to support projects that will encourage innovation and accelerate mental health reform.

A further contribution of \$92 million was allocated for Other Health Services, including \$79 million for AIDS treatment and \$13 million for Palliative Care Services.

**9.30 EMPLOYED PERSONS IN HEALTH OCCUPATIONS, Average Over 1996–97(a)(b)**

|                                                | Males          | Females        | Persons        |
|------------------------------------------------|----------------|----------------|----------------|
| ASCO unit group                                | '000           | '000           | '000           |
| Generalist medical practitioners               | 23.9           | 11.3           | 35.1           |
| Specialist medical practitioners               | 12.5           | 4.0            | 16.5           |
| Registered nurses                              | 10.7           | 134.6          | 145.3          |
| Dental practitioners                           | 6.3            | 1.4            | 7.6            |
| Pharmacists                                    | 6.9            | 6.1            | 13.0           |
| Occupational therapists                        | 0.5            | 4.0            | 4.5            |
| Optometrists                                   | 2.2            | 0.2            | 2.4            |
| Physiotherapists                               | 1.7            | 7.9            | 9.7            |
| Speech pathologists                            | 0.3            | 1.6            | 1.9            |
| Chiropractors and osteopaths                   | 2.3            | 0.9            | 3.2            |
| Podiatrists                                    | 0.0            | 0.9            | 0.9            |
| Medical imaging professionals                  | 2.3            | 5.2            | 7.5            |
| Other health professionals                     | 0.5            | 4.4            | 4.8            |
| <b>Total employed in health occupations(c)</b> | <b>76.8</b>    | <b>204.1</b>   | <b>280.9</b>   |
| <b>Total employed</b>                          | <b>4 746.6</b> | <b>3 616.3</b> | <b>8 362.9</b> |

(a) Average calculated on quarterly estimates. (b) Where numbers are less than 4,000, errors over 25% may occur. (c) Total is for Health Professionals and does not include Health and Welfare associate professionals.

Source: ABS, unpublished Labour Force Survey data.

## 9.31 TOTAL HEALTH EXPENDITURE(a) AND RATE OF GROWTH

| Year                                                 | Expenditure    |                            | Rate of growth |                            |
|------------------------------------------------------|----------------|----------------------------|----------------|----------------------------|
|                                                      | Current prices | Constant 1989–90 prices(a) | Current prices | Constant 1989–90 prices(a) |
|                                                      | \$m            | \$m                        | %              | %                          |
| 1982–83                                              | 13 239         | 20 673                     | ..             | ..                         |
| 1983–84                                              | 14 958         | 21 960                     | 13.0           | 6.2                        |
| 1984–85                                              | 16 546         | 22 862                     | 10.6           | 4.1                        |
| 1985–86                                              | 18 586         | 24 180                     | 12.3           | 5.8                        |
| 1986–87                                              | 21 115         | 25 341                     | 13.6           | 4.8                        |
| 1987–88                                              | 23 333         | 26 287                     | 10.5           | 3.7                        |
| 1988–89                                              | 26 127         | 27 719                     | 12.0           | 5.4                        |
| 1989–90                                              | 28 795         | 28 795                     | 10.2           | 3.9                        |
| 1990–91                                              | 31 223         | 29 435                     | 8.4            | 2.2                        |
| 1991–92                                              | 33 134         | 30 316                     | 6.1            | 3.0                        |
| 1992–93                                              | 34 910         | 31 489                     | 5.4            | 3.9                        |
| 1993–94                                              | 36 495         | 32 602                     | 4.5            | 3.5                        |
| 1994–95                                              | 38 479         | 33 905                     | 5.4            | 4.0                        |
| 1995–96(b)                                           | 41 742         | 36 090                     | 7.3            | 5.3                        |
| <b>Average annual growth rate 1989–90 to 1995–96</b> | <b>—</b>       | <b>—</b>                   | <b>6.3</b>     | <b>3.8</b>                 |

(a) Health expenditure for 1982–83 to 1995–96 is deflated to constant 1989–90 prices using specific health deflators. (b) Based on preliminary AIHW and ABS estimates.

Source: Australian Institute of Health and Welfare, *Health Expenditure Data Base*.

## Medicare

Details of the health financing arrangements under the Medicare program introduced by the Commonwealth Government in February 1984 are available in *Year Book Australia, 1984*.

Medicare is a universal system of health insurance. Under the Health Insurance Act, the Commonwealth provides a Medicare benefit for services listed in the Medicare Benefits Schedule that are rendered by legally qualified medical practitioners, certain prescribed services rendered by approved dentists and optometrical consultations by optometrists. The Schedule is constantly reviewed through ongoing consultations with the medical profession and it is updated twice yearly to reflect current medical practice.

Agreements between the Commonwealth and the States/Territories provide for free inpatient and non-inpatient care at public hospitals. Private patients in public or private hospitals are liable for the medical fees and hospital charges, but can claim Medicare benefits for 75% of the schedule fee for the medical service component. Private health insurance can be purchased to cover the medical fee gap and the hospital charges. For non-hospital services, Medicare benefits are payable at the rate of 85% of the schedule fee for services.

The Medicare scheme is partly financed through the Medicare levy, which was increased from 1% to 1.25% of taxable income on 1 December 1986, increased to 1.4% on 1 July 1993 and again increased to 1.5% on 1 July 1995.

For 1996–97, no levy is payable by single people with income less than \$13,127 per year and by couples and sole parents with income less than \$22,152 per year, with a further \$2,100 per year allowed for each child.

In 1996–97, revenue from the Medicare levy was estimated to be \$4.1 billion.

A Medicare levy surcharge of 1% was introduced from 1 July 1997 for single individuals with taxable incomes in excess of \$50,000 per year, and couples and families with combined taxable incomes in excess of \$100,000, who do not have private hospital cover through private health insurance.

## Pharmaceutical Benefits Scheme

The Pharmaceutical Benefits Scheme (PBS) is a Government subsidy scheme providing access for the Australian community to a wide range of necessary and cost effective medicines.

To access pharmaceutical benefits under the PBS, general patients must pay up to the first \$20.00 for each prescription item. Concessional patients who hold a health card (people with

low incomes and sickness beneficiaries) must pay \$3.20 per prescription item.

Individuals and families are protected from large overall expenses for PBS listed medicines by safety nets. For general patients (non cardholders), once the eligible expenditure of a person and/or their immediate family exceeds \$612.60 within a calendar year, the patient co-payment per item decreases from \$20.00 to the concessional co-payment rate of \$3.20.

For concessional and pensioner patients (cardholders), once their total eligible expenditure exceeds \$166.40 within a calendar year, any further prescriptions are free for the rest of the year. Aged and sickness pensioners (including part pensioners and Veterans' Affairs beneficiaries), continue to have their pensions supplemented by a pharmaceutical allowance of \$2.70 per week payable fortnightly, or \$140.40 per year, to help defray their out-of-pocket pharmaceutical expenses. The allowance is not paid to other concessional beneficiaries.

Patients may pay more than the relevant co-payment where there is more than one brand of a drug. The Government subsidises on the basis of the lowest priced brand and any difference must be met by the patient if a more expensive brand is used. The premium is not eligible to be counted towards the patient's safety net.

In 1996–97, the PBS dealt with over 123 million benefit prescriptions, representing a cost to the government of \$2,332.6 million and a total cost, including co-payments, of \$2,862.7 million.

The number of PBS prescriptions per capita decreased to 6.73 in 1996–97 from 6.87 in 1995–96. While the number of benefit

prescriptions fell by 0.6% over the previous year, the cost to government of these prescriptions grew by a nominal 9.1%.

The disparate rate of growth in prescription numbers and their cost reflects the ongoing trend towards the prescription of newer and more costly medicines. PBS government costs have continued to rise as a percentage of GDP from 0.476% in 1995–96 to 0.496% in 1996–97. While continuing to increase as a percentage of GDP, the rate of growth of the PBS for 1996–97 has slowed following the introduction of the co-payment, to 9.1% in current prices, from an average 15.27% per annum increase over the period 1992–93 to 1995–96.

Average PBS dispensed price as a percentage of Average Weekly Earnings increased in 1996–97 to 3.37% from 3.22% in 1995–96, which also is an indicator of the trend towards use of newer, more expensive medicines. The average dispensed price (in current dollars) of PBS medicines in 1996–97 was \$23.20, compared with \$21.50 in 1995–96.

### Health insurance coverage

The steady decline in the proportion of the population covered by private health insurance for hospital cover has continued, falling from 45% in June 1990 to 32% in June 1997 (table 9.32).

Health funds also offer ancillary cover which provides benefits towards the cost of a range of services not covered under Medicare. These may include ancillary private dental services, optical, chiropractic, podiatry, home nursing and other services. The proportion of the population with ancillary cover has also declined, but at a slower rate than that for hospital cover.

**9.32 PERSONS WITH PRIVATE INSURANCE**

|                              | 1990 | 1992 | 1994 | 1996 | June 1997 |
|------------------------------|------|------|------|------|-----------|
|                              | %    | %    | %    | %    | %         |
| With private hospital cover  | 44.5 | 41.0 | 37.2 | 33.6 | 31.9      |
| With private ancillary cover | 39.9 | 37.5 | 34.5 | 32.9 | 31.6      |

Source: Private Health Insurance Administration Council, *Quarterly Statistics*, June 1997.



## Expenditure on health and medical care

The 1993–94 Household Expenditure Survey provides estimates of expenditure on medical care and health by households across Australia. Expenditure is net of any refunds and rebates received from Medicare, private health insurance companies and employers.

Household expenditure on medical care and health expenses varies according to the life cycle stage of a household (table 9.33). These changes are associated with changes in household size, the amount of income earned and the age of household members. For lone persons under 35 years, for whom household size and income are relatively low, expenditure is the lowest (\$10.56 per week). As the cycle progresses and household size and income generally increase, expenditure also generally increases, reaching its highest at the stage when the household consists of a couple with non-dependent children (\$43.42 per week). By the time a household comprises one person only, aged 65 and over, expenditure has decreased to \$12.81 per week.

A more comprehensive picture of expenditure on health and medical care can be constructed by separately identifying government expenditure on health. An ABS study of the effects of government benefits and taxes allocated government health expenditure in 1993–94 to households according to an ‘insurance premium’ approach. This allocated benefits to persons based on average utilisation rates for their age, sex and State or Territory of residence.

Selected government expenditure in table 9.33 comprises the outlays by government on the provision of health services, including hospital care, medical clinics, pharmaceuticals and other health benefits. Under-allocation of government health expenditure occurred because certain populations, such as people living in special dwellings, are excluded from the Household Expenditure Survey.

## Health-related organisations International

### World Health Organization

The World Health Organization (WHO) is a specialised agency of the United Nations having as its objective the attainment by all peoples of the highest level of health. Australia is assigned to the Western Pacific Region, the headquarters of which is at Manila, and is represented annually at both the World Health Assembly in Geneva and the Regional Committee Meeting in Manila. Australia’s assessed contribution to WHO’s core budget for 1997 was US\$7.4 million.

### The International Agency for Research on Cancer

The International Agency for Research on Cancer (IARC) was established in 1965 within the framework of the WHO. The headquarters of the agency are located in Lyon, France. The objectives and functions of the agency are to provide for planning, promoting and developing research in all phases of the causation, treatment and prevention of cancer. Australia’s contribution to the IARC for 1996 was US\$1.12 million.

## Australian Government

### Health and Community Services Ministerial Council

The Health and Community Services Ministerial Council incorporates the Australian Health Ministers’ Conference (AHMC), Australian Health Ministers’ Advisory Council (AHMAC), Community Services Ministers’ Conference (CSMC) and the Standing Committee of the Community Services and Income Security Administrators (SCCSISA).

The Health and Community Services Ministerial Council was formed in 1993 by a decision of the Council of Australian Governments (COAG), bringing together the Australian Health Ministers’ Conference and the Community Services Ministers’ Conference.

## 9.33 EXPENDITURE PER HOUSEHOLD ON HEALTH AND MEDICAL CARE, 1993-94

|                                                                  | Unit | Couple with dependent children only |                                             |                           |                        |                         |
|------------------------------------------------------------------|------|-------------------------------------|---------------------------------------------|---------------------------|------------------------|-------------------------|
|                                                                  |      | Lone person aged under 35           | Couple only, reference person aged under 35 | Eldest child aged under 5 | Eldest child aged 5-14 | Eldest child aged 15-20 |
| Average weekly household income (gross)                          | \$   | 476.09                              | 963.91                                      | 790.94                    | 842.91                 | 1 022.40                |
| Average number of persons in household                           | no.  | 1.00                                | 2.00                                        | 3.44                      | 4.54                   | 4.15                    |
| Average weekly household expenditure(a)(b)                       |      |                                     |                                             |                           |                        |                         |
| Accident and health insurance(c)                                 | \$   | 4.12                                | 14.46                                       | 15.38                     | 15.95                  | 19.26                   |
| Total practitioners' fees                                        | \$   | 4.25                                | 5.13                                        | 7.91                      | 8.57                   | 10.22                   |
| General practitioner doctor's fees                               | \$   | 0.24                                | 0.59                                        | 1.38                      | 0.90                   | 0.93                    |
| Specialist doctor's fees(c)                                      | \$   | 0.33                                | 1.19                                        | 1.99                      | 1.54                   | 2.02                    |
| Dental charges, Optician's and Practitioner's fees, n.e.c.(c)    | \$   | 3.68                                | 3.37                                        | 4.55                      | 6.13                   | 7.27                    |
| Medicines, pharmaceuticals, therapeutic appliances and equipment | \$   | 2.10                                | 4.14                                        | 8.84                      | 6.71                   | 7.71                    |
| Other health charges                                             | \$   | *0.09                               | *0.34                                       | *1.06                     | *0.61                  | *0.77                   |
| Total household health expenses                                  | \$   | 10.56                               | 24.08                                       | 33.19                     | 31.83                  | 37.96                   |
| Selected government expenditure                                  |      |                                     |                                             |                           |                        |                         |
| Hospital care                                                    | \$   | 6.56                                | 14.41                                       | 26.24                     | 23.62                  | 27.51                   |
| Medical clinics                                                  | \$   | 6.44                                | 14.17                                       | 28.06                     | 30.25                  | 27.11                   |
| Pharmaceuticals                                                  | \$   | 1.36                                | 1.86                                        | 4.95                      | 6.39                   | 5.29                    |
| Other health benefits                                            | \$   | 1.39                                | 2.67                                        | 4.78                      | 6.36                   | 5.30                    |
| Total government health expenditure per household                | \$   | 15.75                               | 33.11                                       | 64.03                     | 66.61                  | 65.21                   |

|                                                                  | Unit | Couple with                               |                             | Couple only                 |                               | Lone person aged over 65 |
|------------------------------------------------------------------|------|-------------------------------------------|-----------------------------|-----------------------------|-------------------------------|--------------------------|
|                                                                  |      | Dependent and non-dependent children only | Non-dependent children only | Reference person aged 55-64 | Reference person aged over 65 |                          |
| Average weekly household income (gross)                          | \$   | 1332.22                                   | 1109.61                     | 544.63                      | 389.98                        | 213.12                   |
| Average number of persons in household                           | no.  | 4.57                                      | 3.27                        | 2.00                        | 2.00                          | 1.00                     |
| Average weekly household expenditure(a)(b)                       |      |                                           |                             |                             |                               |                          |
| Accident and health insurance(c)                                 | \$   | 23.77                                     | 23.50                       | 17.80                       | 13.66                         | 5.26                     |
| Total practitioners' fees(c)                                     | \$   | 11.00                                     | 9.11                        | 6.29                        | 5.54                          | 2.42                     |
| General practitioner doctor's fees                               | \$   | 1.35                                      | 0.79                        | 0.44                        | 0.34                          | 0.06                     |
| Specialist doctor's fees(c)                                      | \$   | 2.02                                      | 2.37                        | 1.49                        | 1.90                          | 0.83                     |
| Dental charges, Optician's and Practitioner's fees, n.e.c.(c)    | \$   | 7.64                                      | 5.96                        | 4.36                        | 3.30                          | 1.53                     |
| Medicines, pharmaceuticals, therapeutic appliances and equipment | \$   | 7.45                                      | 9.40                        | 7.40                        | 7.11                          | 4.22                     |
| Other health charges                                             | \$   | *0.69                                     | *1.40                       | *0.22                       | *1.68                         | *0.91                    |
| Total household health expenses                                  | \$   | 42.91                                     | 43.42                       | 31.71                       | 27.99                         | 12.81                    |
| Selected government expenditure                                  |      |                                           |                             |                             |                               |                          |
| Hospital care                                                    | \$   | 31.04                                     | 36.95                       | 30.23                       | 77.21                         | 47.68                    |
| Medical clinics                                                  | \$   | 29.63                                     | 25.56                       | 20.01                       | 25.67                         | 13.81                    |
| Pharmaceuticals                                                  | \$   | 5.67                                      | 5.82                        | 5.49                        | 10.85                         | 5.99                     |
| Other health benefits                                            | \$   | 5.61                                      | 4.14                        | 3.06                        | 2.48                          | 1.25                     |
| Total government health expenditure per household                | \$   | 71.95                                     | 73.74                       | 58.79                       | 116.21                        | 68.73                    |

(a) The average obtained when the total estimated expenditure for a particular expenditure item is divided by the estimated number of households within the scope of the survey in the relevant category of household type. (b) Net of refunds and rebates. (c) At least one of the estimates in this row has a relative standard error greater than 25%.

Source: ABS, unpublished 1993-94 Household Expenditure Survey data.



The AHMC and its advisory body, the AHMAC, provide a mechanism through which the Commonwealth, State and Territory and New Zealand Governments can discuss matters of mutual interest concerning health policy, services and programs. The AHMC comprises the Commonwealth, State, Territory and New Zealand Ministers responsible for health. Neither the Conference nor the Council has statutory powers, and decisions are reached by consensus.

In 1996, Health Ministers continued to focus on Public Health Partnerships, Aboriginal and Torres Strait Islander health, national health priorities and national women's health programs. Ministers also focused on development of the new Australian health care agreements, together with public health outcome funding arrangements, a national diabetes strategy, immunisation programs, and drugs and poisoning scheduling arrangements. Ministers reviewed coordination and management of organ donation and transplant arrangements and instituted a program to develop a uniform national framework for the control of radiation.

Similarly, the CSMC and its advisory body, the SCCSISA, provide a mechanism through which the Commonwealth, State and Territory, New Zealand and Papua New Guinea Governments can discuss matters of mutual interest concerning community services and welfare policy and programs. The CSMC comprises the Commonwealth, State, Territory, New Zealand and Papua New Guinea Ministers responsible for community services and welfare. Neither the Conference nor the Council has statutory powers, and decisions are reached by consensus.

In 1997, Community Services Ministers discussed a wide range of issues relating to child abuse and protection, inter-country adoptions, youth homelessness, the development of a family services framework, child care and children's services, and commenced an evaluation of supported accommodation assistance programs.

Meeting jointly as the Health and Community Services Ministerial Council, Ministers supported national training reform for the health and community services industry, continued their examination of reform and strategy development for aged care, and progressed the work of the Healthy Ageing Task Force and the National Seniors Tourism Scheme.

Ministers with responsibilities for disability services continued discussions and negotiations on the future directions of disability services and

development of the new Commonwealth–State/Territories Disability Agreement.

## Department of Health and Family Services

The Commonwealth Department of Health and Family Services provides policy advice and implements Commonwealth government policies on public health, health care, health care funding, and family services for all Australians, particularly the aged, people with disabilities and those with children.

Functions of the Department are to:

- provide expert policy advice and analysis to government;
- promote planning by governments focused on outcomes and investment in prevention and early intervention, and incentives for efficient, best practice care;
- work in partnership with others to deliver high quality, cost-effective care designed to meet people's needs better;
- work closely across programs to ensure that the focus is on people and outcomes rather than programs and providers; and
- ensure that, where the Department has a regulatory role, the Department performs it sensitively and objectively.

The Department delivers its services through the following seven programs:

- Public Health (including Health Regulation, and Health Research and Information);
- Health Care and Access (including Medicare Benefits and General Practice Development, Pharmaceutical Benefits, Acute Care and Mental Health);
- Aboriginal and Torres Strait Islander Health;
- Family and Children's Services;
- Aged and Community Care;
- Disability Programs; and
- Corporate Leadership and Management.

The Department works in association with other agencies in the Portfolio, primarily the Health Insurance Commission, the Australian Hearing Services, the Australia New Zealand Food Authority, the Australian Institute of Health and Welfare and the Australian Institute of Family Studies.

### **Australian Institute of Health and Welfare**

The Australian Institute of Health and Welfare (AIHW), is a statutory authority within the Commonwealth Health and Family Services portfolio. The Institute's mission is to inform community discussion and decision making through national leadership in the development and provision of authoritative and timely information and analysis on the health and welfare of Australians.

The AIHW works closely with other agencies which collect data, produce statistics and undertake research and analysis in the health, welfare and housing assistance fields.

The AIHW also provides support to the States and Territories in the health and welfare areas, primarily through the Australian Health Ministers' Advisory Council, the Standing Committee of Community Services and Income Security Administrators, and State and Territory housing authorities.

The Institute's major divisions are located in Canberra. The Institute also supports three collaborating units: the AIHW National Perinatal Statistics Unit (Sydney); the AIHW Dental Statistics and Research Unit (Adelaide); and the AIHW National Injury Surveillance Unit (Adelaide). In addition, the AIHW jointly funds, with the Australian Bureau of Statistics (ABS), the Aboriginal and Torres Strait Islander Health and Welfare Information Unit within the ABS National Centre for Aboriginal and Torres Strait Islander Statistics, Darwin. The National Centre for Classification in Health (which has sites in Sydney and Brisbane) also receives joint funding from AIHW, as well as funding from the ABS and the Department of Health and Family Services.

### **National Health and Medical Research Council**

The National Health and Medical Research Council (NHMRC) is a statutory authority, within the Commonwealth Health and Family Services portfolio, which provides advice to the Commonwealth Government, the State and Territory Governments and the community on matters relating to individual and public health and on health ethics issues. It also advises the Minister for Health and Family Services on funding for medical and public health research.

The NHMRC statement of strategic intent is that the NHMRC will work with others for the health of all Australians. This statement is an important step in realising the NHMRC's role in providing

collaborative leadership throughout the health sector.

The Council comprises nominees of Commonwealth, State and Territory health authorities, and a nominee of the Aboriginal and Torres Strait Islander Commission, as well as members with expertise in business, trade union, health professional education, medical and allied health services, consumer, environmental and welfare issues.

### **The Private Health Insurance Administration Council**

The Private Health Insurance Administration Council (PHIAC) is a statutory authority established in June 1989. The main powers and functions of the Council, which are set out in section 82G of the National Health Act, are as follows:

- to monitor the financial performance of health funds to ensure that the statutory reserve requirements are being met;
- to administer the reinsurance account arrangements;
- to collect and disseminate financial and statistical data, including tabling of an annual report to Parliament on the operations of health funds;
- to establish uniform reporting standards for funds;
- to impose levies to cover the operating costs of the Council and any unpaid claims of a collapsed fund;
- to receive applications for the review of acute care certificates and application fees, and administer the funding arrangements for the operation of the Acute Care Advisory Committees;
- to obtain from registered organisations, for the purposes of modelling, evaluation and research, information referred to in the Hospital Casemix Protocol; and
- to collect and disseminate information about private health insurance, for the purpose of enabling people to make informed choices about private health insurance.

PHIAC disseminates statistics through an annual report and through quarterly reports that are made available to health funds, the Commonwealth Government and State Governments and other users with an interest in health insurance. The statistics are compiled

from registered health benefits organisations' quarterly returns and provide data on membership and coverage, bed days, and benefit paid.

### Australian Quarantine and Inspection Service

The Australian Quarantine and Inspection Service (AQIS) carries significant health-related responsibilities in export inspection, quarantine administration and imported food.

Export inspection activities are derived from the *Export Control Act 1982*, which is the principal legislation for export activities, and subordinate legislation comprising regulations enabled under this Act and Ministerial Orders made under these regulations.

Inspection covers meat, fish, dairy products, processed foods and vegetables, dried fruit, fresh fruit and vegetables, grains, horticultural and plant products, live animals, and some animal products. The aims of the inspectorate are to assist the export of Australian agricultural, forestry and fishery products by providing information, services and facilities that enable exporters to comply with the animal and plant health requirements of importing countries. It also aims to provide effective inspection services for food and other products under AQIS control to ensure that they are safe and wholesome, are informatively described, meet international requirements and facilitate trade.

In 1996–97, AQIS provided inspection for more than \$4 billion worth of export meat to over 120 destinations. An inspection service is also provided by AQIS on behalf of the Northern Territory Government for meat produced for domestic consumption.

A range of non-prescribed goods is also inspected and certified on an ad hoc basis where overseas governments require this as a condition of entry of Australian goods.

AQIS quarantine activities derive from the *Quarantine Act 1908* and the *Biological Control Act 1984*. Programs are designed to address the risk of introduction of diseases and pests while enabling the importation of cleared agricultural products. Animal and plant health requirements are negotiated with exporting countries, involving the latest technology for assurance of quarantine safety.

Quarantine activities in some States are contracted to State Departments of Agriculture on the Commonwealth's behalf, and include

both monitoring and surveillance elements. In 1996–97, inspections based on risk management principles were undertaken of 10,000 ship arrivals, 55,000 first port aircraft arrivals, 7.3 million passengers and aircrew, about 1 million cargo containers (20 foot equivalent units) and 1.8 million airfreight consignments.

Quarantine responsibilities include the administration of animal quarantine stations at Sydney and Melbourne, a high security quarantine station on Cocos (Keeling) Island, and the supervision of a range of plant quarantine stations and private facilities for both animal and plant quarantine.

All food imported into Australia is also subject to inspection under the provisions of the *Imported Food Control Act 1992*. In 1996–97, 30,587 shipments were subject to AQIS clearance, of which 7,274 were automatically released due to the good compliance history of the supplier. The remaining 23,313 shipments were closely inspected and/or analysed, with the result that 1,442 failed to meet the relevant food standards and were denied access to the Australian market place. Where an overseas government's inspection system can be shown to provide safety assurances equivalent to Australia's food inspection system, food accompanied by that agency's certification is allowed entry with minimal inspection and testing on arrival.

AQIS has significant international involvement in the development of international food safety standards and related aspects of hygiene and manufacturing practice.

### Australia New Zealand Food Authority

The Australia New Zealand Food Authority is a statutory authority established by the *Australia New Zealand Food Authority Act 1995*. Its primary function is to develop, vary and review standards for food available in Australia and New Zealand.

The objectives of the Authority in relation to food standards are to:

- protect public health and safety;
- provide consumers with information;
- promote trade and commerce; and
- promote the international alignment of food standards.

The Authority is currently reviewing food standards to ensure consistency between the

Food Standards Code and the standards-setting objectives of the Authority. The review will seek to ensure flexibility in the Code and to accommodate innovation. It also provides a mechanism for the development of joint food standards with New Zealand.

The Authority runs the Imported Food Inspection Program jointly with the Australian Quarantine and Inspection Service, and provides national coordination of food recalls in Australia. It also publishes the biennial Australian Market Basket Survey.

### **National Occupational Health and Safety Commission**

The National Occupational Health and Safety Commission (NOHSC) is a tripartite body comprising representatives of the peak employee and employer bodies — the Australian Council of Trade Unions and the Australian Chambers of Commerce and Industry — as well as the Commonwealth, State and Territory Governments. The mission of the National Commission is to lead and coordinate national efforts to prevent or reduce the incidence and severity of occupational injury and disease by providing healthy and safe working environments. NOHSC has primary Commonwealth responsibility for occupational health and safety statistics.

### **Therapeutic Goods Administration**

The Therapeutic Goods Administration (TGA) within the Department of Health and Family Services is responsible for ensuring that therapeutic products available in Australia are safe, effective and of high quality. Therapeutic goods include prescription drugs, non-prescription medicines, traditional remedies and medical devices.

The TGA conducts audits of manufacturers and pre-market assessments of medicines before they are released into the marketplace, and monitors marketed products through a comprehensive post-market monitoring program.

Pre-market assessment times for new drugs continue to decrease, ensuring early availability in Australia of important new advances for the treatment of serious diseases. The TGA processed 1,039 prescription drug submissions during 1996–97.

The Therapeutic Goods Administration Laboratories (TGAL) undertake targeted sampling of drug and medical device products

on the market. In 1996–97, 1,051 products overall were tested and 180 failed to meet the required standards. This failure rate does not reflect the general quality of available products because the sampling program is largely directed to those products where problems are either known or suspected. Failures which reflect safety concerns result in recall of the batch. In 1996–97, there were 41 recalls of drug products and 113 recalls of medical devices. This represents a very small proportion (0.13% and 0.50% respectively) of the total numbers of these products included in the Australian Register of Therapeutic Goods.

In 1996–97, public health recommendations relating to 195 submissions for registration were made to the National Registration Authority for Agricultural and Veterinary Chemicals (NRA). In addition, major reviews were undertaken for the first five chemicals in the NRA's Existing Chemicals Review Program. Public health recommendations were made in respect of 209 chemicals referred by the National Industrial Chemicals Notification and Assessment Scheme. The TGA has participated in various international programs designed to harmonise risk assessment of chemicals and promote burden sharing through information exchange. Policy advice has been provided to the government on national and international chemicals management. TGA officers helped to develop the policies which formed the basis of Australia's participation in the Second Intergovernmental Forum on Chemical Safety in February 1997.

### **Australian Radiation Laboratory**

The Australian Radiation Laboratory develops national policy relating to radiation health and:

- formulates policy by developing codes of practice and by undertaking other regulatory, compliance, surveillance and advisory responsibilities at the national level with respect to public and occupational health aspects of radiation;
- maintains national standards of radiation exposure and a working standard of absorbed dose;
- provides advice in relation to the quality and use of radio-pharmaceutical substances; and
- in support of the above activities, undertakes research and development in the fields of ionizing and non-ionizing radiations which have implications for public and occupational health.

The Australian Radiation Laboratory continues to have a high standing in international agencies concerned with radiation safety, and has been a substantial contributor to three major guidance documents finalised by the International Commission on Radiological Protection and the International Atomic Energy Agency.

### Cancer registries

Cancer is a notifiable disease in all States and Territories and is the only major disease category for which an almost complete coverage of incidence data is available. Good information on the occurrence of different types of cancer, on characteristics of patients, and on survival and mortality is essential to provide a sound basis for epidemiological studies and the initiation of new prevention and treatment programs.

The only effective method of obtaining cancer incidence data is through universal registration of cancer cases. Cancer incidence data are available from cancer registries which operate in each State and Territory. These registries are supported by a mix of State and Territory government and anti-cancer council funding.

The National Cancer Statistics Clearing House, operated jointly by the Australian Institute of Health and Welfare and the Australasian Association of Cancer Registries, compiles data produced by State and Territory registries on an ongoing basis and produces national statistics on the incidence of cancer.

### Communicable Diseases Network — Australia New Zealand

The Communicable Diseases Network — Australia New Zealand was established in 1990 to enhance national capacity for communicable disease surveillance and control. It comprises Commonwealth, State, Territory and New Zealand public health officers; representatives from the Australian Defence Force, the Department of Primary Industries and Energy, the Australian Institute of Health and Welfare, the Australian Society for Microbiology and the National Centre for Epidemiology and Population Health; and experts in epidemiology and communicable disease control. The Network co-ordinates the surveillance of communicable diseases through the National Notifiable Diseases Surveillance System and a

number of specialised surveillance systems. It also facilitates and coordinates communicable disease control activities where a national response is required.

## Australian non-government

### Diabetes Australia

Diabetes Australia is a federation of eight registered charities, two professional medical associations and two research foundations. The vision of Diabetes Australia is the eradication of diabetes. The mission of Diabetes Australia is to promote and fund research into all aspects of diabetes, to improve the quality of life and assistance provided to those affected by diabetes, and to increase public awareness of the disease.

Diabetes Australia provides the following assistance to people with diabetes:

- the National Diabetic Services Scheme;
- health care and education;
- advocacy;
- research;
- public awareness; and
- membership services.

### Australian Cancer Society

The Australian Cancer Society is a federation of State and Territory cancer councils which fund research, mount professional and public education campaigns and provide a wide range of information and support services to the public.

At the national level the Society is an active partner with Government in the development of a National Cancer Control Plan and the management of the National Breast Cancer Centre and the Kathleen Cunningham Foundation. It has strong links with all of the specialist medical bodies in cancer through its sponsorship of the Australian Cancer Network and enjoys a close affiliation with the Clinical Oncological Society of Australia, the Australian Association of Cancer Registries and the Australian Association of Hospice and Palliative Care.

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<sup>2</sup> McCarthy, D.J., Zimmet, P., Dalton, A., Segal, L. and Welborn, T.A., *The Rise and Rise of Diabetes In Australia: A review of statistics, trends and costs*, 2nd printing, Diabetes Australia, Canberra, 1996.

<sup>3</sup> Australian Health Technology Advisory Committee (1989) of the NHMRC, *Prostate cancer screening*, Commonwealth Department of Health and Family Services, AGPS, Canberra.

<sup>4</sup> Key, T. (1995) *Risk factors for prostate cancer*, Cancer Survey, vol. 23: 63–77.

<sup>5</sup> World Health Organization, *1995 World Health Statistics Annual*, WHO, Geneva.

<sup>6</sup> The data relating to psychiatric hospitals should be treated with caution due to different reporting practices across jurisdictions and years. Any queries on this point should be directed to the Australian Institute of Health and Welfare.



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## Introduction

Housing satisfies the essential needs of people for shelter, security and privacy. Shelter is recognised throughout the world as a basic human right. The adequacy or otherwise of housing is an important component of individual wellbeing. Housing also has an enormous significance in the national economy, with its influence on investment levels, interest rates, building activity and employment.

The ways in which Australian families and individuals are housed reflect social, political and economic factors over the last century. For example, public health concerns towards the end of the nineteenth century resulted in legislation in the States which gave local government the authority to make building regulations and inspect dwellings, a responsibility they have to this day. Also at this time, demand for housing exceeded supply, rents were high, and overcrowding and slum conditions continued to be a problem into the twentieth century. This led to States introducing further legislation for the provision of public rental housing for low income earners. In the 1920s, the Commonwealth moved to provide financial assistance for access to home ownership to moderate and low income groups, and a number of policy initiatives over recent decades have focused on this goal. Governments have continued to actively promote home ownership as part of an overall policy directed at achieving people's self-reliance in housing, and a quality of housing adequate for their needs.

The predominance of separate, free standing houses situated on 'quarter acre blocks' within the mainland capital city areas is a feature of Australian urban development. More recently, governments have moved to promote higher housing densities, to provide greater choice of housing types and to make better use of existing infrastructure. This has resulted in changes to urban planning and building regulation. There have been some changes in the nature of housing, and efficiencies in the use of land and infrastructure. However, even within this new

framework, green field developments and free standing houses still predominate. Households in such developments are still largely reliant on the family car to access many neighbourhood facilities and services.

This chapter provides information on the types of dwellings Australians live in and their tenure arrangements, the affordability of housing and the government assistance provided through housing and income support programs. It is based largely on information from the 1995–96 Survey of Income and Housing Costs, but also draws on house price index data, on data about finance commitments for owner occupation and on administrative data relating to public housing and rent assistance. Care should be taken when comparing statistics from different sources because of differences in the timing, conceptual bases and scope of individual statistical sources.

## Types of dwellings

Table 8.1 shows the number of dwellings of different types in each State and Territory in 1995–96. The table shows that the separate house is the most popular type of dwelling in Australia, making up 79% of all dwellings. Tasmania has the highest proportion of separate houses (83%) and the Northern Territory the lowest (68%). All other States and the Australian Capital Territory are in the range 76% to 81%.

Flats, units or apartments are the next most common type of dwelling in Australia, with 12% of all dwellings falling into this category. New South Wales with 15% has the highest proportion of flats, units or apartments, followed by Victoria and the Northern Territory (each with 13%). Tasmania and Western Australia have relatively low percentages of flats, units or apartments (each with 8%).

Semi-detached, row or terrace houses and town houses comprise 8% of dwellings in Australia. South Australia, Western Australia, the Northern Territory and the Australian Capital Territory have more semi-detached housing than flats, units or apartments.

## 8.1 NUMBER OF DWELLINGS, By State/Territory — 1995–96

|                              | Separate house | Semi-detached/row<br>or terrace<br>house/townhouse | Flat/unit/apartment | Other   | Total   |
|------------------------------|----------------|----------------------------------------------------|---------------------|---------|---------|
| State/Territory              | '000           | '000                                               | '000                | '000    | '000    |
| New South Wales              | 1 732.1        | 184.2                                              | 349.8               | (a)20.4 | 2 286.5 |
| Victoria                     | 1 382.1        | 101.0                                              | 214.8               | (a)10.0 | 1 707.8 |
| Queensland                   | 1 026.0        | 77.1                                               | 142.5               | 19.9    | 1 265.5 |
| South Australia              | 453.2          | 77.3                                               | 56.0                | n.p.    | 587.2   |
| Western Australia            | 525.5          | 81.2                                               | 55.1                | (b)2.9  | 664.7   |
| Tasmania                     | 155.3          | 11.8                                               | 14.9                | (a)4.5  | 186.4   |
| Northern Territory(c)        | 32.6           | 8.2                                                | 6.4                 | n.p.    | 47.9    |
| Australian Capital Territory | 87.4           | 13.7                                               | 11.3                | —       | 112.4   |
| Australia                    | 5 394.1        | 554.5                                              | 850.8               | 59.2    | 6 858.5 |

(a) The estimate has a relative standard error of 25% to 50%. (b) The estimate has a relative standard error greater than 50%.

(c) Excludes remote and rural areas.

Source: *Housing Occupancy and Costs, Australia (4130.0)*.

## Number of bedrooms

One indicator of dwelling size is the number of bedrooms. In 1995–96, half of all dwellings in Australia had three bedrooms (table 8.2). For separate houses, 58% had three bedrooms, while two bedroom dwellings were more common in semi-detached homes and flats, units and apartments (47% and 60% respectively).

Over a third (35%) of three bedroom dwellings had only two persons living in them, a further 19% had three persons living in them, and 19% had four persons (table 8.3). About 18% of three bedroom dwellings had only one person living in them.

Information on the incidence of other types of rooms such as bathrooms, toilets, laundries and lounge/dining/family rooms is available from the 1994 Australian Housing Survey.

## 8.2 NUMBER OF DWELLINGS, By Dwelling Structure and Number of Bedrooms — 1995–96

|                    | Separate house | Semi-detached/row<br>or terrace<br>house/townhouse | Flat/unit/apartment | Other   | Total   |
|--------------------|----------------|----------------------------------------------------|---------------------|---------|---------|
| No. of bedrooms    | '000           | '000                                               | '000                | '000    | '000    |
| Bedsitter          | 64.8           | (a)18.4                                            | 31.5                | n.p.    | 118.1   |
| One bedroom        | 53.2           | 67.6                                               | 228.3               | 19.7    | 368.8   |
| 2 bedrooms         | 691.5          | 261.7                                              | 513.2               | 19.8    | 1 486.2 |
| 3 bedrooms         | 3 129.7        | 193.7                                              | 71.4                | (a)15.8 | 3 410.6 |
| 4 or more bedrooms | 1 454.9        | (a)13.1                                            | (a)6.4              | n.p.    | 1 474.8 |
| All dwellings      | 5 394.1        | 554.5                                              | 850.8               | 59.2    | 6 858.5 |

(a) The estimate has a relative standard error of 25% to 50%.

Source: *Housing Occupancy and Costs, Australia (4130.0)*.

**8.3 NUMBER OF DWELLINGS, By Number of Persons and Number of Bedrooms — 1995–96**

|                      | One person  | Two persons | Three persons | Four persons | Five or more | Total        | Total          |
|----------------------|-------------|-------------|---------------|--------------|--------------|--------------|----------------|
| No. of bedrooms      | %           | %           | %             | %            | %            | %            | '000           |
| Bedsitter            | (a)12.3     | 55.0        | 19.7          | (a)7.6       | (a)5.3       | 100.0        | 118.1          |
| One bedroom          | 82.5        | 16.2        | n.p.          | n.p.         | n.p.         | 100.0        | 368.8          |
| 2 bedrooms           | 42.5        | 41.1        | 10.6          | 4.5          | 1.3          | 100.0        | 1 486.2        |
| 3 bedrooms           | 17.5        | 35.3        | 19.0          | 19.3         | 8.9          | 100.0        | 3 410.6        |
| 4 or more bedrooms   | 7.6         | 23.6        | 15.5          | 25.5         | 27.7         | 100.0        | 1 474.8        |
| <b>All dwellings</b> | <b>24.2</b> | <b>33.4</b> | <b>15.5</b>   | <b>16.2</b>  | <b>10.8</b>  | <b>100.0</b> | <b>6 858.5</b> |

(a) The estimate has a relative standard error of 25% to 50%.

Source: *Housing Occupancy and Costs, Australia (4130.0)*.

## Tenure

### Home ownership and renting

Australia has a high rate of home ownership. In 1995–96, of the 6.9 million households in Australia, 70% were living in their own home and 28% were renting their dwelling from public or private landlords (table 8.4).

Of those who owned their home, about 60% owned it outright. The remainder were paying off a mortgage or loan secured against their dwelling. The proportion of households who own their home outright has increased progressively (rising from 39% in 1985–86 to 42% in 1995–96) as greater numbers of purchasers pay off their mortgages. This trend

may continue as Australia's population gradually ages. However, the recent increase in the diversity of financial instruments available has meant that increasing numbers of loans, being secured against dwellings, have been taken out for non-housing purposes. This may slow down the future increase in outright home ownership.

Of the 1.9 million households renting their dwellings, 71% were renting privately (from real estate agents and private landlords), while 21% were renting from public housing authorities and the remaining 8% from other landlords.

Around 90% of owners lived in separate houses in 1995–96. Of renter households, 51% lived in separate houses and 31% lived in flats, units or apartments.

**8.4 DWELLING STRUCTURE, By Tenure Type — 1995–96**

|                          | Separate house | Semi-detached/row<br>or terrace<br>house/townhouse | Flat/unit/apartment | Other       | Total          |
|--------------------------|----------------|----------------------------------------------------|---------------------|-------------|----------------|
| Tenure type              | '000           | '000                                               | '000                | '000        | '000           |
| Owner without a mortgage | 2 561.1        | 132.6                                              | 139.4               | 24.6        | 2 857.7        |
| Owner with a mortgage    | 1 749.7        | 90.3                                               | 88.1                | (a)3.6      | 1 931.6        |
| Renter                   |                |                                                    |                     |             |                |
| Public                   | 192.3          | 94.6                                               | 115.4               | —           | 402.3          |
| Private                  | 698.1          | 202.1                                              | 447.5               | 21.6        | 1 369.3        |
| Total(b)                 | 979.3          | 321.3                                              | 604.8               | 27.3        | 1 932.6        |
| Rent-free                | 104.0          | (c)10.4                                            | (c)18.4             | n.p.        | 136.6          |
| <b>Total</b>             | <b>5 394.1</b> | <b>554.5</b>                                       | <b>850.8</b>        | <b>59.2</b> | <b>6 858.5</b> |

(a) The estimate has a relative standard error greater than 50%. (b) Includes a small number of 'other' landlord types (total 161,000). (c) The estimate has a relative standard error of 25% to 50%.

Source: *Housing Occupancy and Costs, Australia (4130.0)*.

Almost 34% of households who owned their own home outright were couples with no children. One-parent households accounted for 6% of outright owners and lone-person households made up 24% (based on table 8.5).

The majority (81%) of couple households were owners, with only 17% renting. Of one-parent families, 52% were owners, 20% were renting government housing and 24% were renting privately.

Tenure patterns vary across States and Territories. Victoria had the highest proportion of home ownership overall, with 73% of

dwellings either being purchased or owned outright (table 8.6). The lowest rate for home ownership (45%) was in the Northern Territory; the remaining rates ranged from 65% in the Australian Capital Territory to 72% in South Australia. The Australian Capital Territory had the highest proportion of households purchasing their home (38%). In the Northern Territory more than half of all households rented their home (51%), significantly higher than the national rate of 28%. These differences partly reflect differences in the age and life structures across States and Territories (see section *Life cycle groups*).

### 8.5 TENURE, By Type of Household — 1995-96

| Type of household                   | Owner without a mortgage | Owner with a mortgage | Renters      |                |                |              |                |
|-------------------------------------|--------------------------|-----------------------|--------------|----------------|----------------|--------------|----------------|
|                                     |                          |                       | Public       | Private        | Total(a)       | Rent-free    | Total          |
|                                     | '000                     | '000                  | '000         | '000           | '000           | '000         | '000           |
| Couple only                         | 966.4                    | 379.9                 | 32.0         | 220.3          | 270.5          | 33.1         | 1 649.8        |
| Couple with dependent children only | 468.0                    | 824.5                 | 68.4         | 248.7          | 344.7          | 27.4         | 1 664.6        |
| Couple — other                      | 447.2                    | 251.6                 | (b)16.8      | 51.2           | 76.9           | (b)9.0       | 784.7          |
| <b>Total couples</b>                | <b>1 881.5</b>           | <b>1 456.0</b>        | <b>117.2</b> | <b>520.1</b>   | <b>692.1</b>   | <b>69.5</b>  | <b>4 099.1</b> |
| One parent — one family             | 175.8                    | 124.2                 | 115.3        | 138.7          | 278.0          | n.p.         | 582.3          |
| Lone person                         | 692.6                    | 271.2                 | 163.0        | 417.7          | 637.4          | 56.9         | 1 658.0        |
| Other                               | 107.8                    | 80.2                  | (b)6.8       | 292.7          | 325.2          | (b)5.9       | 519.1          |
| <b>Total</b>                        | <b>2 857.7</b>           | <b>1 931.6</b>        | <b>402.3</b> | <b>1 369.3</b> | <b>1 932.6</b> | <b>136.6</b> | <b>6 858.5</b> |

(a) Includes a small number of 'other' landlord types (total 161,000). (b) The estimate has a relative standard error of 25% to 50%.

Source: *Housing Occupancy and Costs, Australia* (4130.0).

### 8.6 TENURE, By State/Territory — 1995-96

| State/Territory | Owner without a mortgage | Owner with a mortgage | Renters    |             |             |            |              | Total          |
|-----------------|--------------------------|-----------------------|------------|-------------|-------------|------------|--------------|----------------|
|                 |                          |                       | Public     | Private     | Total(a)    | Rent-free  | Total        |                |
|                 | %                        | %                     | %          | %           | %           | %          | %            | '000           |
| NSW             | 42.9                     | 25.2                  | 6.5        | 21.5        | 29.9        | 2.0        | 100.0        | 2 286.5        |
| Vic.            | 43.8                     | 29.3                  | 3.4        | 19.5        | 24.9        | 2.0        | 100.0        | 1 707.8        |
| Qld             | 41.4                     | 27.2                  | 5.2        | 22.2        | 29.9        | 1.5        | 100.0        | 1 265.5        |
| SA              | 42.2                     | 29.5                  | 9.6        | 14.0        | 26.7        | (b)1.6     | 100.0        | 587.2          |
| WA              | 36.1                     | 34.4                  | 4.6        | 18.6        | 26.3        | 3.1        | 100.0        | 664.7          |
| Tas.            | 41.5                     | 29.0                  | 8.0        | 14.8        | 26.9        | (b)2.6     | 100.0        | 186.4          |
| NT(c)           | 20.3                     | 24.3                  | 28.6       | 16.0        | 51.2        | (b)4.3     | 100.0        | 47.9           |
| ACT             | 26.7                     | 38.0                  | 11.4       | 20.3        | 34.4        | n.p.       | 100.0        | 112.4          |
| <b>Aust.</b>    | <b>41.7</b>              | <b>28.2</b>           | <b>5.9</b> | <b>20.0</b> | <b>28.2</b> | <b>2.0</b> | <b>100.0</b> | <b>6 858.5</b> |

(a) Includes a small number of 'other' landlord types (total 161,000). (b) The estimate has a relative standard error of 25% to 50%.

(c) Excludes remote and rural areas.

Source: *Housing Occupancy and Costs, Australia* (4130.0).

## Housing affordability

### Housing costs

Housing costs cover different items for different types of tenure. For households renting their dwelling, housing costs comprise the regular rental amounts paid to landlords. For owners with a mortgage, housing costs comprise the value of the mortgage payments as well as property rates. For owners who have no mortgage, housing costs comprise only the rates paid.

In 1995–96, mean (average) weekly housing costs for all households were \$103 (table 8.7). However, there was considerable variation in housing costs, with half of all households having payments of less than \$58 per week.

Housing costs for owners with a mortgage, at an average of \$203 per week, were higher than for other forms of tenure. Households renting from private landlords had mean weekly housing costs of \$148, compared to \$62 for public renters.

For many households, weekly housing costs are a significant proportion of their weekly income. Housing costs represented over 25% of gross weekly income for a third of households who were paying off a housing mortgage and for over 40% of private renter households. This can have a major effect on funds left over for households to spend on other necessities such as food, clothing and transport. For low income households in particular, the level of housing costs may be a major factor in the economic wellbeing of the occupants.

**8.7 HOUSING COSTS, By Household Composition By Tenure Type — 1995–96**

| Tenure type                                             | Couple only | Couple with dependent children only | Couple — other | Total couples | One parent — one family | Lone person | Other  | Total          |
|---------------------------------------------------------|-------------|-------------------------------------|----------------|---------------|-------------------------|-------------|--------|----------------|
| <b>MEAN WEEKLY HOUSING COSTS (\$)</b>                   |             |                                     |                |               |                         |             |        |                |
| Owner without a mortgage                                | 19          | 27                                  | 24             | 22            | 22                      | 16          | 24     | <b>21</b>      |
| Owner with a mortgage                                   | 221         | 211                                 | 176            | 208           | 146                     | 195         | 226    | <b>203</b>     |
| Public renter                                           | 77          | 89                                  | (a)97          | 87            | 63                      | 43          | (a)86  | <b>62</b>      |
| Private renter                                          | 169         | 158                                 | 176            | 164           | 139                     | 115         | 170    | <b>148</b>     |
| Total renters(b)                                        | 154         | 137                                 | 148            | 145           | 104                     | 91          | 160    | <b>124</b>     |
| Total owner and renter households                       | 89          | 143                                 | 86             | 110           | 88                      | 76          | 142    | <b>103</b>     |
| <b>MEAN WEEKLY INCOME (\$)</b>                          |             |                                     |                |               |                         |             |        |                |
| Owner without a mortgage                                | 585         | 1 011                               | 1 365          | 877           | 717                     | 307         | 930    | <b>731</b>     |
| Owner with a mortgage                                   | 1 084       | 1 095                               | 1 371          | 1 140         | 720                     | 692         | 1 197  | <b>1 052</b>   |
| Public renter                                           | 445         | 575                                 | (a)767         | 567           | 359                     | 198         | (a)683 | <b>360</b>     |
| Private renter                                          | 1 018       | 712                                 | 1 030          | 873           | 502                     | 444         | 974    | <b>726</b>     |
| Total renters(b)                                        | 934         | 704                                 | 960            | 823           | 441                     | 371         | 964    | <b>643</b>     |
| Total owner and renter households                       | 761         | 989                                 | 1 327          | 962           | 585                     | 398         | 994    | <b>798</b>     |
| <b>MEAN HOUSING COSTS AS A PROPORTION OF INCOME (%)</b> |             |                                     |                |               |                         |             |        |                |
| Owner without a mortgage                                | 3           | 3                                   | 2              | 3             | 3                       | 5           | 3      | <b>3</b>       |
| Owner with a mortgage                                   | 20          | 19                                  | 13             | 18            | 20                      | 28          | 19     | <b>19</b>      |
| Public renter                                           | 17          | 15                                  | (a)13          | 15            | 18                      | 22          | (a)13  | <b>17</b>      |
| Private renter                                          | 17          | 22                                  | 17             | 19            | 28                      | 26          | 17     | <b>20</b>      |
| Total renters(b)                                        | 16          | 19                                  | 15             | 18            | 24                      | 24          | 17     | <b>19</b>      |
| Total owner and renter households                       | 12          | 14                                  | 6              | 11            | 15                      | 19          | 14     | <b>13</b>      |
| <b>HOUSEHOLDS ('000)</b>                                |             |                                     |                |               |                         |             |        |                |
| Owner without a mortgage                                | 966.4       | 468.0                               | 447.2          | 1 881.5       | 175.8                   | 692.6       | 107.8  | <b>2 857.7</b> |
| Owner with a mortgage                                   | 379.9       | 824.5                               | 251.6          | 1 456.0       | 124.2                   | 271.2       | 80.2   | <b>1 931.6</b> |
| Public renter                                           | 32.0        | 68.4                                | (a)16.8        | 117.2         | 115.3                   | 163.0       | (a)6.8 | <b>402.3</b>   |
| Private renter                                          | 220.3       | 248.7                               | 51.2           | 520.1         | 138.7                   | 417.7       | 292.7  | <b>1 369.3</b> |
| Total renters(b)                                        | 270.5       | 344.7                               | 76.9           | 692.1         | 278.0                   | 637.4       | 325.2  | <b>1 932.6</b> |
| Total owner and renter households                       | 1 616.7     | 1 637.2                             | 775.7          | 4 029.6       | 578.0                   | 1 601.1     | 513.2  | <b>6 721.9</b> |

(a) The estimate has a relative standard error of 25% to 50%. (b) Includes other renters.

Source: *Housing Occupancy and Costs, Australia (4130.0)*.

## Life cycle groups

Households can vary considerably in terms of their size and composition, as well as their housing tenure and the type of dwelling they occupy. All of these factors, along with location of the dwelling, influence their housing costs.

Households may be small, as with young single person households and those comprising young childless couples. They tend to grow in size as the couples get older and have children.

Household size usually reaches its peak when parents and their dependent and adult children

share the same dwelling. As children leave home, household size again declines.

The tenure of the dwelling tends to follow a similar progression to the life cycle of the occupants. This cycle follows a pattern of renting accommodation in early adulthood, moving to home purchase and mortgages while raising a family, and owning the accommodation outright without any mortgage in older age. Other factors that affect housing payments, such as income, are similarly related to life cycle stages. Housing payments and tenure are examined below in terms of life cycle progression.

### 8.8 HOUSING COSTS, By Tenure Type By Selected Life Cycle Groups — 1995–96

| Selected life cycle groups                       | Owner<br>without a<br>mortgage | Owner with a<br>mortgage | Renters |          |          | Total   |
|--------------------------------------------------|--------------------------------|--------------------------|---------|----------|----------|---------|
|                                                  |                                |                          | Public  | Private  | Total(a) |         |
| MEAN WEEKLY HOUSING COSTS (\$)                   |                                |                          |         |          |          |         |
| Lone person only, under 35                       | 15                             | 215                      | (b)57   | 122      | 110      | 136     |
| Couple only, reference person under 35           | 29                             | 265                      | n.p.    | 160      | 159      | 198     |
| Couple with dependent children only              | 27                             | 211                      | 89      | 158      | 137      | 143     |
| One parent with dependent children               | 22                             | 149                      | 58      | 134      | 99       | 100     |
| Couple with non-dependent children only          | 24                             | 192                      | (b)96   | 162      | 135      | 73      |
| Couple only, reference person 55 to 64           | 20                             | 141                      | (b)94   | (b)280   | 201      | 50      |
| Couple only, reference person 65 and over        | 17                             | 62                       | (b)62   | (b)101   | 82       | 23      |
| Lone person only, 65 and over                    | 15                             | (b)45                    | 38      | 87       | 55       | 25      |
| MEAN WEEKLY INCOME (\$)                          |                                |                          |         |          |          |         |
| Lone person only, under 35                       | 624                            | 637                      | (b)282  | 486      | 468      | 531     |
| Couple only, reference person under 35           | 965                            | 1 174                    | n.p.    | 1 001    | 993      | 1 077   |
| Couple with dependent children only              | 1 011                          | 1 095                    | 575     | 712      | 704      | 989     |
| One parent with dependent children               | 540                            | 592                      | 338     | 452      | 397      | 464     |
| Couple with non-dependent children only          | 1 349                          | 1 372                    | (b)718  | 960      | 861      | 1 313   |
| Couple only, reference person 55 to 64           | 631                            | 827                      | (b)504  | (b)1 286 | 975      | 684     |
| Couple only, reference person 65 and over        | 429                            | 498                      | (b)324  | (b)351   | 341      | 427     |
| Lone person only, 65 and over                    | 242                            | (b)275                   | 182     | 229      | 198      | 232     |
| MEAN HOUSING COSTS AS A PROPORTION OF INCOME (%) |                                |                          |         |          |          |         |
| Lone person only, under 35                       | 2                              | 34                       | (b)20   | 25       | 24       | 26      |
| Couple only, reference person under 35           | 3                              | 23                       | n.p.    | 16       | 16       | 18      |
| Couple with dependent children only              | 3                              | 19                       | 15      | 22       | 19       | 14      |
| One parent with dependent children               | 4                              | 25                       | 17      | 30       | 25       | 22      |
| Couple with non-dependent children only          | 2                              | 14                       | (b)13   | 17       | 16       | 6       |
| Couple only, reference person 55 to 64           | 3                              | 17                       | (b)19   | (b)22    | 21       | 7       |
| Couple only, reference person 65 and over        | 4                              | 12                       | (b)19   | (b)29    | 24       | 5       |
| Lone person only, 65 and over                    | 6                              | (b)17                    | 21      | 38       | 28       | 11      |
| HOUSEHOLDS ('000)                                |                                |                          |         |          |          |         |
| Lone person only, under 35                       | 24.5                           | 112.9                    | (b)19.1 | 186.5    | 225.7    | 363.0   |
| Couple only, reference person under 35           | 29.7                           | 163.6                    | n.p.    | 143.6    | 150.0    | 343.3   |
| Couple with dependent children only              | 468.0                          | 824.5                    | 68.4    | 248.7    | 344.7    | 1 637.2 |
| One parent with dependent children               | 49.6                           | 83.1                     | 97.6    | 108.0    | 216.5    | 349.2   |
| Couple with non-dependent children only          | 292.8                          | 103.6                    | (b)12.0 | 22.8     | 37.0     | 433.4   |
| Couple only, reference person 55 to 64           | 282.4                          | 46.2                     | (b)11.1 | (b)16.7  | 28.7     | 357.4   |
| Couple only, reference person 65 and over        | 488.5                          | 25.2                     | (b)15.2 | (b)16.4  | 32.1     | 545.8   |
| Lone person only, 65 and over                    | 423.1                          | (b)9.3                   | 68.3    | 45.9     | 136.0    | 568.5   |

(a) Includes other renters. (b) The estimate has a relative standard error of 25% to 50%.

Source: *Housing Occupancy and Costs, Australia (4130.0)*.



### Young single households

Young one-person households are relatively small in number. In 1995–96, these households numbered 363,000 (table 8.8). The majority of young singles under the age of 35 are still living with parent(s) and many others are in group houses. It is estimated that in 1995–96 there were 283,900 group houses with young people under 35 years.

The high cost of living alone is probably one of the deciding factors in the choice of shared housing for the young. For young singles living alone in 1995–96, over half (51%) were living in private rental accommodation, with average weekly housing costs of \$122. This constituted an average of 25% of gross weekly income for these households. An additional 31% of these young single households had embarked on home purchase and were paying off a mortgage. Their average housing costs were higher at \$215 per week or 34% of gross weekly income. The 5% of young single households which were public renters had much lower housing costs of \$57 or 20% of gross income.

### Couples only, under 35 years

Young couple households were more likely to have moved into home purchase than their single counterparts. Of the 343,300 young couple only households in 1995–96, about 163,600 or 48% were paying off a mortgage and 9% had already paid off their mortgage. An additional 42% were renting privately and almost none were tenants of public housing.

### Couple households with dependent children

The trend to home purchase increases as couples become parents and raise their children. In 1995–96, for couples with dependent children only, 50% were paying off a mortgage and 29% were owners without a mortgage. Over one-fifth of the couple families with dependent children were still renting their accommodation and these were mainly renting from private landlords. Average weekly housing costs varied for different types of tenure, from \$211 for those with a mortgage to \$27 for those without a mortgage. Public renters were paying \$89 per week and private renters \$158.

### One-parent households

In 1995–96, 14% of one-parent households owned their homes without a mortgage, 24% were still paying off a mortgage and over 60% were renting their accommodation. Compared

to most other households, a high proportion of one-parent households (28%) were renting from a public landlord.

Housing costs were similarly varied for one-parent households with different types of tenancy, ranging from a low average of \$22 per week for owners without a mortgage to a high of \$149 for those with a mortgage. Of those renting, private renters paid an average of \$134 compared to \$58 per week for public renters.

Incomes also varied considerably across one-parent households, mainly reflecting their different attachments to the labour force. Owners paying off a mortgage tended to have higher average weekly incomes than those in other tenancy arrangements, \$592 compared to \$452 for private renters and \$338 for public renters. The group with the highest proportion of their income committed to housing payments were those who were renting privately, with mean payments of \$134 a week constituting 30% of gross weekly income.

### Early retirement years

For many parents, the need to accommodate dependent children has ceased by the time they reach their mid-fifties. Some older couples have only non-dependent children present (433,400 in 1995–96) and a smaller number of couples (357,400) in 1995–96 were again living alone.

The wide disparity in income for couples in this age group living alone is clear from the fact that, while the mean weekly household income was \$684, 50% of these households had an income of less than \$504 (median income).

Almost 80% of couples aged 55–64 and living alone were owners without a mortgage. Their housing payments were low at an average of \$20 per week, or 3% of total household income. About 13% of the households were owners with a mortgage, and both this group and those who were renting were paying substantially higher proportions of their income in housing payments, 17% and 21% respectively.

### Older households

By the traditional retirement age of 65 years, both incomes and housing payments have been greatly reduced. In 1995–96, 90% of older couple households were owners without a mortgage with average weekly housing costs of \$17. For older couples who still had a mortgage, these repayments were also considerably lower than those of their younger counterparts at an

average of \$62 per week. This reflects in part the fact that these households would have purchased their first home some 10 to 20 years earlier when home prices and mortgages were considerably lower.

However, for the small proportion who were renting, housing payments consumed relatively large proportions of their incomes. In 1995–96, about 32,100 or 6% of couples aged 65 and over were renting, with average housing payments of \$82 or 24% of their average weekly income. The 16,400 who were renting privately were spending an average of 29% of their income on housing payments and the 15,200 public renters were spending an average of 19%.

In 1995–96 there were about 568,500 lone-person households with the occupant aged 65 years or over. The lone older people were less likely than the older couples to be owners without a mortgage, 74% and 90% respectively. A relatively high proportion of older people living alone were public renters, 12% in 1995–96. A further 8% were renting from private landlords. While the dollar value of their housing payments was lower than for the older couples with similar tenure, they were paying slightly higher proportions of their incomes for their housing.

### Capital cities

In 1995–96, the mean weekly housing costs for households in all capital cities was \$114 (table 8.9). However, there was considerable variation between capital cities, with Hobart the lowest at \$86 per week. Canberra had the highest mean housing costs at \$141 per week, due mainly to Canberra having a higher proportion of owners with a mortgage (38% compared to 30% for all capital cities).

Housing costs for home owners without a mortgage were similar across all capital cities, ranging from an average of \$17 a week in Darwin to \$25 per week in Melbourne.

For home owners with a mortgage, average weekly housing costs were highest in Sydney and Darwin (\$249 and \$245 respectively), while they were lowest in Hobart (\$147).

For households renting privately, housing costs were significantly higher in Sydney where private rents averaged \$194 per week. Lowest rents were recorded in Perth and Hobart (each \$126) and Adelaide (\$127).

Mean weekly housing costs for households renting from State or Territory housing authorities ranged from \$52 in Brisbane to \$98 in Darwin.

### Recent home buyers

In 1995–96, almost 1.1 million households were recent home purchasers (that is, they had purchased within three years prior to the survey) (table 8.10). Of these, 38% were first home buyers and 62% were changeover buyers. The majority of recent home buyers purchased an established home, accounting for 77% of first home buyers and 72% of changeover buyers.

The median value of dwellings varied according to whether the household was a first home buyer or changeover buyer and whether the dwelling was new or established. For first home buyers the median value was \$121,000 compared with \$163,000 for changeover buyers. The median value of new homes was \$159,000, about 20% more than for established homes. However, new homes were also bigger, with an average number of bedrooms of 3.3 compared to 3.0 for established homes.

Housing costs for recent home buyers varied according to whether the household was a first home buyer or changeover buyer, a reflection of first home buyers' larger mortgages. First home buyers had higher housing costs and spent a greater proportion of their income on housing, 23% compared to 18% for changeover buyers.

## 8.9 HOUSING COSTS, By Capital City By Tenure Type — 1995–96

| Tenure type                                      | Sydney | Melbourne | Brisbane | Adelaide | Perth | Hobart | Darwin(a) | Canberra | All capital cities |
|--------------------------------------------------|--------|-----------|----------|----------|-------|--------|-----------|----------|--------------------|
| MEAN WEEKLY HOUSING COSTS (\$)                   |        |           |          |          |       |        |           |          |                    |
| Owner without a mortgage                         | 23     | 25        | 23       | 18       | 20    | 20     | 17        | 24       | 23                 |
| Owner with a mortgage                            | 249    | 210       | 221      | 171      | 194   | 147    | 245       | 228      | 216                |
| Public renter                                    | 60     | 60        | 52       | 62       | 56    | 63     | 98        | 77       | 62                 |
| Private renter                                   | 194    | 142       | 145      | 127      | 126   | 126    | 169       | 170      | 160                |
| Total renters(b)                                 | 162    | 126       | 123      | 102      | 112   | 97     | 118       | 135      | 135                |
| Total owner and renter households                | 129    | 108       | 112      | 92       | 106   | 86     | 129       | 141      | 114                |
| MEAN WEEKLY INCOME (\$)                          |        |           |          |          |       |        |           |          |                    |
| Owner without a mortgage                         | 886    | 793       | 792      | 726      | 718   | 720    | 911       | 952      | 811                |
| Owner with a mortgage                            | 1 306  | 1 074     | 1 042    | 1 010    | 1 057 | 986    | 1 166     | 1 209    | 1 129              |
| Public renter                                    | 346    | 378       | 292      | 370      | 356   | 366    | 555       | 407      | 362                |
| Private renter                                   | 942    | 674       | 692      | 641      | 686   | 705    | 861       | 955      | 783                |
| Total renters(b)                                 | 805    | 617       | 621      | 537      | 625   | 568    | 758       | 764      | 685                |
| Total owner and renter households                | 969    | 834       | 812      | 770      | 815   | 759    | 894       | 985      | 869                |
| MEAN HOUSING COSTS AS A PROPORTION OF INCOME (%) |        |           |          |          |       |        |           |          |                    |
| Owner without a mortgage                         | 3      | 3         | 3        | 2        | 3     | 3      | 2         | 3        | 3                  |
| Owner with a mortgage                            | 19     | 20        | 21       | 17       | 18    | 15     | 21        | 19       | 19                 |
| Public renter                                    | 17     | 16        | 18       | 17       | 16    | 17     | 18        | 19       | 17                 |
| Private renter                                   | 21     | 21        | 21       | 20       | 18    | 18     | 20        | 18       | 20                 |
| Total renters(b)                                 | 20     | 20        | 20       | 19       | 18    | 17     | 16        | 18       | 20                 |
| Total owner and renter households                | 13     | 13        | 14       | 12       | 13    | 11     | 14        | 14       | 13                 |
| HOUSEHOLDS ('000)                                |        |           |          |          |       |        |           |          |                    |
| Owner without a mortgage                         | 553    | 516       | 222      | 169      | 183   | 27     | 10        | 30       | 1 709              |
| Owner with a mortgage                            | 362    | 365       | 166      | 143      | 170   | 25     | 12        | 43       | 1 286              |
| Public renter                                    | 93     | 43        | 36       | 38       | 19    | 8      | 14        | 13       | 264                |
| Private renter                                   | 344    | 246       | 137      | 68       | 99    | 13     | 8         | 23       | 937                |
| Total renters(b)                                 | 460    | 309       | 179      | 115      | 125   | 24     | 25        | 39       | 1 274              |
| Total owner and renter households                | 1 375  | 1 190     | 566      | 427      | 478   | 77     | 46        | 111      | 4 269              |

(a) The Northern Territory, excluding remote and rural areas. (b) Includes other renters.

Source: *Housing Occupancy and Costs, Australia (4130.0)*.

## 8.10 HOUSING COSTS, By Recent(a) Home Buyers By Selected Characteristics — 1995-96

|                                                  | First home buyer   |                            |       | Changeover buyer   |                            |       | Total              |                            |         |
|--------------------------------------------------|--------------------|----------------------------|-------|--------------------|----------------------------|-------|--------------------|----------------------------|---------|
|                                                  | Purchased new home | Purchased established home | Total | Purchased new home | Purchased established home | Total | Purchased new home | Purchased established home | Total   |
| MEAN WEEKLY HOUSING COSTS (\$)                   |                    |                            |       |                    |                            |       |                    |                            |         |
| Couple only                                      | 257                | 223                        | 231   | 120                | 153                        | 143   | 169                | 185                        | 181     |
| Couple with dependent children only              | 213                | 201                        | 204   | 218                | 204                        | 209   | 216                | 203                        | 207     |
| Couple — other                                   | (b)136             | (b)233                     | 205   | 205                | 159                        | 176   | 191                | 179                        | 183     |
| Total couples                                    | 223                | 214                        | 217   | 184                | 181                        | 182   | 196                | 193                        | 194     |
| One parent — one family                          | n.p.               | (b)117                     | 104   | (b)62              | 150                        | 139   | (b)54              | 143                        | 131     |
| Lone person                                      | (b)148             | 144                        | 144   | 91                 | 153                        | 139   | 112                | 149                        | 141     |
| Other                                            | n.p.               | 214                        | 212   | (c)160             | (b)125                     | 131   | (b)175             | 184                        | 183     |
| Total                                            | 205                | 193                        | 196   | 166                | 171                        | 169   | 179                | 180                        | 179     |
| MEAN HOUSING COSTS AS A PROPORTION OF INCOME (%) |                    |                            |       |                    |                            |       |                    |                            |         |
| Couple only                                      | 24                 | 22                         | 22    | 14                 | 17                         | 16    | 18                 | 19                         | 19      |
| Couple with dependent children only              | 24                 | 23                         | 23    | 19                 | 19                         | 19    | 20                 | 20                         | 20      |
| Couple — other                                   | (b)13              | (b)25                      | 22    | 14                 | 13                         | 13    | 14                 | 15                         | 15      |
| Total couples                                    | 23                 | 22                         | 23    | 16                 | 17                         | 17    | 18                 | 19                         | 19      |
| One parent — one family                          | n.p.               | (b)31                      | 22    | (b)7               | 19                         | 17    | (b)6               | 21                         | 18      |
| Lone person                                      | (b)30              | 25                         | 26    | 19                 | 25                         | 24    | 24                 | 25                         | 25      |
| Other                                            | n.p.               | 20                         | 21    | (c)11              | (b)14                      | 13    | (b)16              | 18                         | 18      |
| Total                                            | 23                 | 23                         | 23    | 16                 | 18                         | 18    | 18                 | 20                         | 20      |
| MEDIAN VALUE OF DWELLING (\$'000)                |                    |                            |       |                    |                            |       |                    |                            |         |
| Couple only                                      | 121.1              | 123.8                      | 123.1 | 167.8              | 152.0                      | 159.9 | 153.3              | 131.4                      | 136.1   |
| Couple with dependent children only              | 147.8              | 116.8                      | 120.9 | 195.3              | 170.8                      | 174.6 | 168.9              | 152.9                      | 159.7   |
| Couple — other                                   | (b)201.3           | (b)124.6                   | 137.3 | 228.7              | 163.1                      | 175.0 | 205.5              | 149.2                      | 171.5   |
| Total couples                                    | 138.4              | 120.3                      | 122.5 | 179.6              | 165.6                      | 170.5 | 167.3              | 141.0                      | 151.2   |
| One parent — one family                          | n.p.               | (b)116.6                   | 120.6 | (b)145.0           | 146.6                      | 145.9 | (b)142.7           | 128.7                      | 135.1   |
| Lone person                                      | (b)121.7           | 115.5                      | 116.0 | 124.3              | 133.0                      | 129.6 | 123.3              | 120.4                      | 120.7   |
| Other                                            | n.p.               | 124.0                      | 123.8 | (c)149.0           | (b)143.3                   | 145.2 | (b)130.0           | 125.2                      | 126.1   |
| Total                                            | 131.6              | 119.1                      | 120.9 | 170.8              | 157.7                      | 162.5 | 158.6              | 131.4                      | 139.9   |
| HOUSEHOLDS (%)                                   |                    |                            |       |                    |                            |       |                    |                            |         |
| Couple only                                      | 29.5               | 29.9                       | 29.8  | 26.7               | 23.8                       | 24.6  | 27.7               | 26.3                       | 26.6    |
| Couple with dependent children only              | 41.2               | 26.2                       | 29.6  | 41.7               | 36.2                       | 37.7  | 41.6               | 32.2                       | 34.6    |
| Couple — other                                   | (b)6.3             | (b)4.5                     | 4.9   | 12.2               | 8.3                        | 9.4   | 10.3               | 6.8                        | 7.7     |
| Total couples                                    | 77.0               | 60.6                       | 64.3  | 80.7               | 68.4                       | 71.8  | 79.5               | 65.3                       | 69.0    |
| One parent — one family                          | n.p.               | (b)3.7                     | 3.3   | (b)3.2             | 8.6                        | 7.1   | (b)2.8             | 6.7                        | 5.7     |
| Lone person                                      | (b)17.7            | 24.8                       | 23.2  | 14.4               | 19.3                       | 18.0  | 15.5               | 21.5                       | 20.0    |
| Other                                            | n.p.               | 10.9                       | 9.2   | (c)1.7             | (b)3.7                     | 3.1   | (b)2.2             | 6.6                        | 5.4     |
| Total                                            | 100.0              | 100.0                      | 100.0 | 100.0              | 100.0                      | 100.0 | 100.0              | 100.0                      | 100.0   |
| OTHER CHARACTERISTICS                            |                    |                            |       |                    |                            |       |                    |                            |         |
| Av. no. of persons in household                  | 2.7                | 2.4                        | 2.5   | 3.1                | 2.8                        | 2.9   | 2.9                | 2.6                        | 2.7     |
| Av. no. of bedrooms in dwelling                  | 3.0                | 2.8                        | 2.8   | 3.4                | 3.1                        | 3.2   | 3.3                | 3.0                        | 3.1     |
| Av. age of reference person                      | 33.3               | 32.8                       | 32.9  | 46.7               | 45.5                       | 45.8  | 42.2               | 40.4                       | 40.9    |
| Households ('000)                                | 94.0               | 321.7                      | 415.7 | 189.1              | 483.7                      | 672.8 | 283.2              | 805.3                      | 1 088.5 |

(a) Home buyers who bought their dwelling in the three years prior to the survey. (b) The estimate has a relative standard error of 25% to 50%. (c) The estimate has a relative standard error greater than 50%.

Source: *Housing Occupancy and Costs, Australia (4130.0)*.

## House prices

House price indexes enable the comparison of price changes between cities, though not the price levels themselves.

Canberra, Hobart and Adelaide were the only capital cities where the price index of established houses for 1996–97 was lower than for 1995–96. Canberra recorded the greatest drop in prices (of 1.1%), followed by Hobart (1.0%), and Adelaide (0.1%) (table 8.11).

The greatest rise in established house prices in 1996–97 was recorded in Darwin (4.7%). Other capital city price rises were in Melbourne (3.9%),

Sydney (2.7%), Perth (0.9%), and Brisbane (0.3%). The housing market remains patchy, with price movements generally more positive than in 1995–96, an overall increase of 2.1%.

In 1996–97, project home prices (cost of new dwellings excluding land) rose only in Darwin (by 4.7%), Melbourne (0.4%), and Sydney (0.2%). Prices fell in the other cities, in Adelaide by 4.0%, in Brisbane and Canberra by 0.9%, in Perth by 0.3%, and in Hobart by 0.1% (table 8.12).

The price index of materials used in house building is discussed in *Chapter 20, Construction*.

**8.11 PRICE INDEX NUMBERS FOR ESTABLISHED HOUSES(a)**

|                               | Sydney | Melbourne | Brisbane | Adelaide | Perth | Hobart | Darwin | Canberra |
|-------------------------------|--------|-----------|----------|----------|-------|--------|--------|----------|
| INDEX NUMBER                  |        |           |          |          |       |        |        |          |
| 1993–94                       | 108.8  | 95.2      | 138.0    | 109.1    | 104.7 | 122.5  | 155.7  | 134.4    |
| 1994–95                       | 113.7  | 97.9      | 139.3    | 111.7    | 109.0 | 129.0  | 178.1  | 130.4    |
| 1995–96                       | 115.8  | 97.6      | 136.8    | 108.3    | 108.2 | 129.8  | 188.0  | 127.8    |
| 1996–97                       | 118.9  | 101.4     | 137.2    | 108.2    | 109.2 | 128.5  | 196.9  | 126.4    |
| CHANGE FROM PREVIOUS YEAR (%) |        |           |          |          |       |        |        |          |
| 1994–95                       | 4.5    | 2.8       | 0.9      | 2.4      | 4.1   | 5.3    | 14.4   | –3.0     |
| 1995–96                       | 1.8    | –0.3      | –1.8     | –3.0     | –0.7  | 0.6    | 5.6    | –2.0     |
| 1996–97                       | 2.7    | 3.9       | 0.3      | –0.1     | 0.9   | –1.0   | 4.7    | –1.1     |

(a) Reference base year 1989–90 = 100.0.

Source: *House Price Indexes: Eight Capital Cities* (6416.0).

**8.12 PRICE INDEX NUMBERS FOR PROJECT HOMES(a)**

|                               | Sydney | Melbourne | Brisbane | Adelaide | Perth | Hobart | Darwin | Canberra |
|-------------------------------|--------|-----------|----------|----------|-------|--------|--------|----------|
| INDEX NUMBER                  |        |           |          |          |       |        |        |          |
| 1993–94                       | 105.8  | 103.9     | 110.1    | 111.4    | 96.2  | 117.7  | 118.6  | 132.7    |
| 1994–95                       | 107.9  | 105.8     | 112.5    | 114.6    | 100.0 | 121.3  | 125.2  | 129.2    |
| 1995–96                       | 110.2  | 107.3     | 113.7    | 112.8    | 101.6 | 123.4  | 129.9  | 124.7    |
| 1996–97                       | 110.4  | 107.7     | 112.7    | 108.3    | 101.3 | 123.3  | 136.0  | 123.6    |
| CHANGE FROM PREVIOUS YEAR (%) |        |           |          |          |       |        |        |          |
| 1994–95                       | 2.0    | 1.8       | 2.2      | 2.9      | 4.0   | 3.1    | 5.6    | –2.6     |
| 1995–96                       | 2.1    | 1.4       | 1.1      | –1.6     | 1.6   | 1.7    | 3.8    | –3.5     |
| 1996–97                       | 0.2    | 0.4       | –0.9     | –4.0     | –0.3  | –0.1   | 4.7    | –0.9     |

(a) Reference base year 1989–90 = 100.0.

Source: *House Price Indexes: Eight Capital Cities* (6416.0).

## Value of dwellings

In the 1995–96 Survey of Income and Housing Costs, owners were asked to estimate the value of their dwelling. These estimates may differ from valuations made by accredited valuers or the actual sale price of the dwelling. The extent of the difference has not been measured. Therefore some care needs to be exercised in the use of these data.

The median owner-estimated value of dwellings for capital cities was \$156,000, 11% higher than the national median (\$141,000). The median value was highest in Sydney at \$210,000, followed by Canberra (\$163,000), Brisbane (\$150,000) and Perth (\$146,000) (table 8.13).

## Housing finance

In 1996–97, a total of \$49,978.5m was committed for the purchase of 481,436 dwellings (table 8.14). The value of housing loans increased by 14.4% compared with 1995–96 and the number of loans increased by 6.6%. The number of loans was 11.6% lower than the 1993–94 peak of 544,485. In 1996–97, 81% of the money was used to purchase or refinance established dwellings, 13.3% to finance construction of new dwellings and the remainder (5.3%) was used to purchase newly

erected dwellings. Since 1995–96 the amount of refinancing activity has increased, with the number of loans refinanced rising by 13% in 1996–97 and the value of refinanced housing loans rising by 33.1%.

Banks continued to be the predominant lenders. However, there has been increasing diversity of lenders. In 1996–97, the number of finance commitments made by banks increased by 4.8% to 400,720 (83.2% of all borrowers, down from 84.7% in the previous year). The number of finance commitments made to individuals by permanent building societies in 1996–97 fell by 18.5% to 19,705 (4.1% of all borrowers). The number of finance commitments to individuals made by other lenders, including mortgage managers, in 1996–97 increased by 35.9% to 61,011 (12.7% of all borrowers, up from 9.9% in 1995–96). The number of finance commitments to individuals made by mortgage managers in 1996–97 was 32,484 or 6.7% of all borrowers.

In 1996–97, the average borrowing from all types of lenders was \$103,811. The average borrowings from different types of lenders were very similar. The average borrowing from banks was \$103,529, from permanent building societies \$103,009, and from other lenders \$105,927 (including the average borrowing from mortgage managers of \$130,380).

**8.13 VALUE OF DWELLINGS(a), By Dwelling Structure By Capital City — 1995–96**

|                                              | Sydney       | Melbourne    | Brisbane     | Adelaide     | Perth        | Hobart       | Canberra     | All capital cities(b) |
|----------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------|
| MEDIAN VALUE OF DWELLINGS (\$'000)           |              |              |              |              |              |              |              |                       |
| Separate house                               | 215.8        | 140.5        | 151.9        | 122.0        | 152.6        | 121.3        | 164.6        | 158.6                 |
| Semi-detached/row or terrace house/townhouse | 198.9        | 132.0        | (c)121.3     | 123.2        | 116.0        | (d)77.1      | 141.3        | 137.0                 |
| Flat/unit/apartment                          | 198.7        | 103.3        | (c)120.4     | 87.6         | 96.6         | (c)94.4      | (c)126.3     | 127.2                 |
| <b>All dwellings(e)</b>                      | <b>210.3</b> | <b>136.0</b> | <b>149.5</b> | <b>119.7</b> | <b>146.4</b> | <b>119.8</b> | <b>162.7</b> | <b>156.0</b>          |
| NUMBER ('000)                                |              |              |              |              |              |              |              |                       |
| Capital city dwellings                       | 915.3        | 880.3        | 387.7        | 311.9        | 353.0        | 52.3         | 72.8         | 2 994.6               |

(a) According to owners. (b) Includes the Northern Territory, for which disaggregated data are not sufficiently reliable for most purposes. (c) The estimate has a relative standard error of 25% to 50%. (d) The estimate has a relative standard error greater than 50%. (e) Includes other dwellings.

Source: *Housing Occupancy and Costs, Australia* (4130.0).

**8.14 SECURED HOUSING FINANCE COMMITMENTS(a), By Purpose and Type of Lender**

| 6.14 SECURED HOUSING FINANCE COMMITMENTS(a), By Purpose and Type of Lender |      |           |                              |                  | Type of lender |
|----------------------------------------------------------------------------|------|-----------|------------------------------|------------------|----------------|
|                                                                            | Unit | Banks     | Permanent building societies | Other lenders(b) | Total          |
| CONSTRUCTION OF DWELLINGS                                                  |      |           |                              |                  |                |
| Dwelling units                                                             |      |           |                              |                  |                |
| 1994-95                                                                    | no.  | 73 597    | 4 464                        | 3 717            | 81 778         |
| 1995-96                                                                    | no.  | r56 535   | r3 404                       | 4 289            | r64 228        |
| 1996-97                                                                    | no.  | 58 191    | 2 880                        | 4 792            | 65 863         |
| Value of commitments                                                       |      |           |                              |                  |                |
| 1994-95                                                                    | \$m  | 6 495.4   | 429.2                        | 350.8            | 7 275.3        |
| 1995-96                                                                    | \$m  | r5 333.8  | r356.7                       | 395.5            | r6 086.1       |
| 1996-97                                                                    | \$m  | 5 827.3   | 338.7                        | 482.3            | 6 648.3        |
| PURCHASE OF NEWLY ERECTED DWELLINGS                                        |      |           |                              |                  |                |
| Dwelling units                                                             |      |           |                              |                  |                |
| 1994-95                                                                    | no.  | 19 228    | 990                          | 1 440            | 21 658         |
| 1995-96                                                                    | no.  | r18 341   | r467                         | 2 007            | r20 815        |
| 1996-97                                                                    | no.  | 19 356    | 281                          | 3 415            | 23 052         |
| Value of commitments                                                       |      |           |                              |                  |                |
| 1994-95                                                                    | \$m  | 1 985.7   | 98.8                         | 140.2            | 2 224.6        |
| 1995-96                                                                    | \$m  | r1 916.5  | r49.4                        | r212.3           | r2 178.1       |
| 1996-97                                                                    | \$m  | 2 275.2   | 32.5                         | 346.2            | 2 653.9        |
| PURCHASE OF ESTABLISHED DWELLINGS(c)                                       |      |           |                              |                  |                |
| Dwelling units                                                             |      |           |                              |                  |                |
| 1994-95                                                                    | no.  | 305 249   | 21 271                       | 21 392           | 347 912        |
| 1995-96                                                                    | no.  | r307 570  | r20 309                      | 38 598           | r366 477       |
| 1996-97                                                                    | no.  | 323 173   | 16 544                       | 52 804           | 392 521        |
| Value of commitments                                                       |      |           |                              |                  |                |
| 1994-95                                                                    | \$m  | 28 844.0  | 1 854.8                      | 2 107.3          | 32 806.1       |
| 1995-96                                                                    | \$m  | r29 564.0 | r1 888.7                     | 3 961.7          | r35 414.4      |
| 1996-97                                                                    | \$m  | 33 383.6  | 1 658.6                      | 5 634.1          | 40 676.3       |
| TOTAL                                                                      |      |           |                              |                  |                |
| Dwelling units                                                             |      |           |                              |                  |                |
| 1994-95                                                                    | no.  | 398 074   | 26 725                       | 26 549           | 451 348        |
| 1995-96                                                                    | no.  | 382 446   | r24 180                      | 44 894           | r451 520       |
| 1996-97                                                                    | no.  | 400 720   | 19 705                       | 61 011           | 481 436        |
| Value of commitments                                                       |      |           |                              |                  |                |
| 1994-95                                                                    | \$m  | 37 325.0  | 2 382.7                      | 2 598.3          | 42 306.0       |
| 1995-96                                                                    | \$m  | r36 814.3 | r2 294.7                     | 4 569.5          | r43 678.5      |
| 1996-97                                                                    | \$m  | 41 486.0  | 2 029.8                      | 6 462.7          | 49 978.5       |

(a) Excludes alterations and additions. (b) Includes mortgage managers. (c) Includes refinancing.

Source: *Housing Finance for Owner Occupation, Australia* (5609.0).

## Housing assistance

While most Australians are able to house themselves without government assistance, such assistance remains important for various population groups, especially low income earners. Housing assistance is provided by the Commonwealth, State and Territory Governments through a range of housing and other programs. Long-term assistance for people with low incomes is provided through public housing, home purchase assistance and private rent assistance. Assistance is also provided to community organisations and local governments for refugees and crisis accommodation.

The *Housing Assistance Act 1996* provided the legislative basis for the Commonwealth's provision of financial assistance to the States and Territories for housing and related purposes up to 30 June 1997. The Act authorised the Commonwealth to form and enter into a new Commonwealth State Housing Agreement (CSHA) with the States and Territories. The 1996 CSHA commenced on 1 July 1996 and will continue for up to three years. It sets out the terms for the provision of housing assistance for rental housing, home purchase and other specific housing programs. Details of the assistance provided under the CSHA for 1996–97 are set out in table 8.15.



### 8.15 COMMONWEALTH-STATE HOUSING AGREEMENT, Payments To States for 1996-97 Following Deduction of Final State Fiscal Contributions

|                                   | NSW            | Vic.           | Qld           | WA             | SA            | Tas.          | ACT           | NT            | Aust.          |
|-----------------------------------|----------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|
|                                   | \$'000         | \$'000         | \$'000        | \$'000         | \$'000        | \$'000        | \$'000        | \$'000        | \$'000         |
| Base Funding(a)                   | 290 663        | 213 536        | 43 249        | 82 498         | 51 696        | 26 235        | 9 137         | 14 370        | 731 384        |
| Community Housing                 | 21 675         | 15 924         | 11 679        | 6 152          | 5 197         | 1 667         | 1 074         | 622           | 63 990         |
| Aboriginal Rental Housing Program | 17 777         | 3 638          | 25 227        | 15 862         | 8 342         | 696           | 0             | 19 458        | 91 000         |
| Crisis Accommodation Program      | 13 432         | 9 868          | 7 238         | 3 812          | 3 221         | 1 033         | 665           | 386           | 39 655         |
| <b>Total</b>                      | <b>343 547</b> | <b>242 966</b> | <b>87 393</b> | <b>108 324</b> | <b>68 456</b> | <b>29 631</b> | <b>10 876</b> | <b>34 836</b> | <b>926 029</b> |

(a) The original proposed allocations for Base Funding for Queensland, South Australia and the Australian Capital Territory have been reduced to give the final allocations above in view of agreement reached for these two States and the ACT to use Base Funding to meet part or all of their State Fiscal Contribution to the Commonwealth's Budget savings.

Source: Department of Social Security.

The 1996 CSHA is an outcomes-based agreement which requires States to report annually on their performance against key outcome measures and provides an improved level of accountability for and transparency of housing operations.

#### Public housing

Public housing comprises dwellings owned and managed by State and Territory housing authorities and which are made available at low cost to tenants. Rents are generally set at a maximum of 25% of income, thereby providing low cost housing to people on low incomes. The median weekly housing costs of public renters in 1995-96 was \$53, compared to \$139 for private renters. Government expenditure on public housing was \$1.6 billion in 1995-96.

Over recent decades, public housing has been increasingly targeted towards those most in need. In 1995-96, 402,300 households (6% of all households) were living in public housing; of these, 79% were in the lowest 40% of the household income distribution. Government pensions and benefits were the main source of income for the majority of households in public housing. The proportion of households living in public housing varied across the States and Territories, ranging from 3% in Victoria to 29% in the Northern Territory.

#### Private rent assistance

Private rent assistance is paid to people who rent privately (including boarders and lodgers,

residents in caravan parks, etc.) and pay rent above minimum threshold rental levels. It is a non-taxable supplement payable by the Departments of Social Security, Veterans' Affairs and Employment, Education, Training and Youth Affairs to people with low income who are eligible. In 1995-96, there were about 900,000 recipients of rent assistance, with total expenditure being \$1.55 billion. The level of rent assistance payable varies with the amount of rent paid, marital status and number of children in the family. For example, for a couple with one or two children who paid over \$255 a fortnight in rent, the maximum fortnightly rent assistance was \$87 in 1997.

As with public housing renters, a large proportion of rent assistance recipients are either lone persons or lone parents. At December 1995, 60% of those receiving rent assistance from the Department of Social Security were people living alone, and 18% were one-parent families.

#### Home purchase assistance

Commonwealth, State and Territory Governments provide home purchase assistance to low to moderate income earners, including loans, deposit assistance and rental/purchaser arrangements. In 1995-96, government expenditure on home purchase assistance was \$658 million.



### Crisis accommodation

Governments also provide assistance in meeting the short-term accommodation needs of homeless people. The Commonwealth Government provides capital funding for crisis accommodation through the Crisis Accommodation Program (\$47 million in 1995–96 and \$40 million in 1996–97) under the CSHA. Commonwealth, State and Territory Governments also provide assistance to people who are homeless through the Supported Accommodation Assistance Program (SAAP).

In 1996–97, \$222 million was provided under SAAP. Funds are provided to community organisations and local governments for services such as refuges, shelters and half way houses, and also for referral, counselling and advocacy services. About 1,300 service outlets are funded under SAAP.

The Australian Institute of Health and Welfare (AIHW) estimates that at least 47,000 persons considered homeless under the SAAP definition received assistance from agencies in the six months from July to December 1996. These persons had 64,000 completed support periods over that time. Agencies provided support to more male clients (56%) than female clients (44%). Clients between 15 and 19 years of age were the single largest age grouping, accounting for one-fifth of all clients. Those aged between 20 and 24 constituted 16% of the total.

In relation to the housing circumstances of clients prior to their use of services, the largest proportion of support periods (31%) was for clients who were living in the private rental market. Almost one-quarter of support periods (24%) was for clients who had no shelter at all or had been living in a car, tent or squat prior to seeking assistance, while in 20% of support periods clients had been staying at accommodation funded by SAAP or the Crisis Accommodation Program.

Crisis or short term accommodation (less than three months) was provided much more frequently than other types of accommodation. In a large proportion of cases the duration of accommodation was one week or less.

### Other programs

Commonwealth housing assistance provided under the CSHA is complemented by financial assistance for housing through a number of other programs which include:

- Residential care for frail older people — the Commonwealth Government provides capital and recurrent funding for the construction and operational costs of long-term residential aged care facilities such as nursing homes and hostels (see *Chapter 7, Income and welfare, Residential care for aged people* section).
- Accommodation services for people with a disability — under the Commonwealth/State Disability Agreement, the Commonwealth provides funding to the States and Territories for the provision of accommodation services for people with disabilities, while State and Territory Governments are responsible for administering these services (see *Chapter 7, Income and welfare, People with a disability* section).
- Housing assistance programs for Aboriginal and Torres Strait Islander peoples — the Aboriginal and Torres Strait Islander Commission (ATSIC) administers a number of programs to improve the living environment of Aboriginal and Torres Strait Islander Australians, with the aim of improving community and individual health and wellbeing. The Home Ownership scheme is designed to reduce the disparity between the rate of home ownership in indigenous communities and in the wider Australian community. The scheme provides home loans at concessional interest rates to Aboriginal and Torres Strait Islander families. It targets low-income families with the capacity to repay a long-term loan but who have difficulty obtaining finance from traditional lending institutions. ATSIC's Community Housing and Infrastructure Program provides funds for the construction of community housing as well as for maintenance, repairs and infrastructure (essential services such as water, roads, sewerage and electricity). ATSIC can also provide grants to State government water and power agencies to accelerate the provision of essential and municipal services to severely disadvantaged rural and remote communities.

The Commonwealth also funds the Australian Institute of Health and Welfare. The Institute's role is to gather, analyse and disseminate national data on health and welfare services, including housing assistance, in order to support both government and community organisations' planning and policy making. In 1997, the Institute published *Australia's Welfare 1997: Services and Assistance* which contains chapters on housing assistance and services for homeless people. Included in these chapters is

information examining the need for assistance, government expenditure on services and assistance, the characteristics of recipients of assistance, and outcomes. The Institute undertakes data development for the performance reporting required by the Commonwealth State Housing Agreement.

A housing authority also exists in each State and Territory, which is responsible for the provision of public rental housing and often other housing related services such as home loans. These authorities are:

- New South Wales — Department of Urban Affairs and Planning;
- Victoria — Department of Human Services;
- Queensland — Department of Public Works and Housing;
- South Australia — South Australian Housing Trust;
- Western Australia — Homeswest;
- Tasmania — Department of Community and Health Services;
- Northern Territory — Department of Housing and Local Government; and
- Australian Capital Territory — ACT Housing.

benefits which residents derive from a particular location generally result from factors such as access to goods and services, access to employment, including distance travelled to work, and the quality of their social and physical environment.

In the 1994 Australian Housing Survey, over 90% of households approached expressed satisfaction with their dwelling location, and only 2% were dissatisfied (table 8.16). Renters, especially public renters, expressed lower levels of satisfaction with their dwelling location, with 80% of public renters satisfied and 6% dissatisfied. The level of satisfaction with access to goods and services generally was high. Only 3% of all households were dissatisfied with access to work, and 4% with access to shops. Dissatisfaction levels were higher for access to public transport (12%), entertainment (11%), hospitals (8%) and parks (5%) (table 8.17).

A dwelling's immediate location accounts for only part of the neighbourhood experience for many residents. Australia's population is highly urbanised. The continual growth of most of Australia's capital cities leads to increasing population densities, which increase congestion and associated problems. This in turn affects the quality of air and water, and the level of noise, waste and other environmental problems within local areas.

## Neighbourhood

Neighbourhood, or location, can also have a significant impact on social wellbeing. The

**8.16 SATISFACTION WITH HOUSING, By Tenure Type — 1994**

|                                     | Owner<br>without a<br>mortgage | Owner with<br>a mortgage | Public<br>renter | Private<br>renter | Total<br>renters(a) | Other(b) | Total          |
|-------------------------------------|--------------------------------|--------------------------|------------------|-------------------|---------------------|----------|----------------|
| PROPORTION (%)                      |                                |                          |                  |                   |                     |          |                |
| Satisfaction with dwelling location |                                |                          |                  |                   |                     |          |                |
| Satisfied                           | 93.6                           | 90.6                     | 79.5             | 89.0              | 86.3                | 88.1     | <b>90.6</b>    |
| Neither satisfied nor dissatisfied  | 5.0                            | 7.7                      | 14.4             | 8.4               | 10.2                | 7.8      | <b>7.2</b>     |
| Dissatisfied                        | 1.4                            | 1.6                      | 6.1              | 2.5               | 3.6                 | 4.1      | <b>2.1</b>     |
| Overall satisfaction with dwelling  |                                |                          |                  |                   |                     |          |                |
| Satisfied                           | 92.6                           | 88.2                     | 69.6             | 74.0              | 72.9                | 81.4     | <b>85.7</b>    |
| Neither satisfied nor dissatisfied  | 6.4                            | 10.1                     | 22.1             | 20.2              | 20.8                | 13.7     | <b>11.6</b>    |
| Dissatisfied                        | 1.0                            | 1.7                      | 8.3              | 5.8               | 6.3                 | 4.8      | <b>2.8</b>     |
| Total                               | 100.0                          | 100.0                    | 100.0            | 100.0             | 100.0               | 100.0    | <b>100.0</b>   |
| NUMBER ('000)                       |                                |                          |                  |                   |                     |          |                |
| Households                          | 2 793.9                        | 1 890.3                  | 414.8            | 1 271.4           | 1 845.1             | 148.6    | <b>6 677.9</b> |

(a) Includes other renters. (b) Includes rent-free and other households.

Source: Australian Housing Survey, *Housing Characteristics, Costs and Conditions* (4182.0).

## 8.17 SATISFACTION WITH ACCESS TO WORK AND SERVICES, By Tenure Type — 1994

|                                    | Owner<br>without a<br>mortgage | Owner with<br>a mortgage | Public<br>renter | Private<br>renter | Total<br>renters (a) | Other (b) | Total   |
|------------------------------------|--------------------------------|--------------------------|------------------|-------------------|----------------------|-----------|---------|
| PROPORTION (%)                     |                                |                          |                  |                   |                      |           |         |
| Access to work                     |                                |                          |                  |                   |                      |           |         |
| Satisfied                          | 48.3                           | 74.6                     | 36.0             | 70.5              | 61.6                 | 55.1      | 59.5    |
| Neither satisfied nor dissatisfied | 3.8                            | 9.8                      | 4.3              | 6.5               | 6.2                  | 5.9       | 6.2     |
| Dissatisfied                       | 2.2                            | 4.3                      | 3.1              | 4.4               | 4.0                  | 5.3       | 3.4     |
| Not applicable                     | 45.7                           | 11.2                     | 56.7             | 18.5              | 28.3                 | 33.8      | 30.9    |
| Access to shops                    |                                |                          |                  |                   |                      |           |         |
| Satisfied                          | 88.2                           | 90.7                     | 82.1             | 90.5              | 87.8                 | 79.2      | 88.6    |
| Neither satisfied nor dissatisfied | 7.5                            | 6.1                      | 11.1             | 6.7               | 8.1                  | 10.3      | 7.4     |
| Dissatisfied                       | 3.6                            | 3.1                      | 5.5              | 2.7               | 3.7                  | 8.3       | 3.6     |
| Not applicable                     | 0.7                            | (c)0.1                   | 1.4              | (d)0.0            | 0.4                  | (c)2.1    | 0.5     |
| Access to public transport         |                                |                          |                  |                   |                      |           |         |
| Satisfied                          | 54.8                           | 55.5                     | 67.2             | 65.9              | 64.2                 | 48.8      | 57.5    |
| Neither satisfied nor dissatisfied | 9.0                            | 11.1                     | 10.4             | 8.4               | 9.0                  | 6.1       | 9.6     |
| Dissatisfied                       | 12.9                           | 14.1                     | 9.8              | 8.3               | 9.3                  | 13.6      | 12.3    |
| Not applicable                     | 23.2                           | 19.3                     | 12.5             | 17.4              | 17.5                 | 31.6      | 20.7    |
| Access to doctors                  |                                |                          |                  |                   |                      |           |         |
| Satisfied                          | 86.2                           | 85.8                     | 80.4             | 82.6              | 81.3                 | 76.6      | 84.5    |
| Neither satisfied nor dissatisfied | 9.0                            | 8.8                      | 12.5             | 10.8              | 11.6                 | 13.5      | 9.8     |
| Dissatisfied                       | 3.9                            | 4.2                      | 6.1              | 4.2               | 4.9                  | 6.7       | 4.3     |
| Not applicable                     | 0.9                            | 1.2                      | 1.0              | 2.4               | 2.1                  | 3.1       | 1.4     |
| Access to hospital                 |                                |                          |                  |                   |                      |           |         |
| Satisfied                          | 77.1                           | 75.3                     | 66.9             | 71.3              | 69.7                 | 67.0      | 74.3    |
| Neither satisfied nor dissatisfied | 14.3                           | 15.7                     | 17.1             | 16.8              | 17.3                 | 18.8      | 15.6    |
| Dissatisfied                       | 7.1                            | 7.3                      | 13.6             | 7.5               | 9.1                  | 10.0      | 7.8     |
| Not applicable                     | 1.5                            | 1.7                      | 2.3              | 4.5               | 3.9                  | 4.3       | 2.3     |
| Access to parks                    |                                |                          |                  |                   |                      |           |         |
| Satisfied                          | 76.3                           | 80.7                     | 68.8             | 82.4              | 78.4                 | 70.5      | 78.0    |
| Neither satisfied nor dissatisfied | 9.4                            | 11.3                     | 14.7             | 10.9              | 12.0                 | 13.7      | 10.8    |
| Dissatisfied                       | 5.5                            | 5.4                      | 7.5              | 4.1               | 5.1                  | 3.7       | 5.3     |
| Not applicable                     | 8.8                            | 2.6                      | 9.0              | 2.6               | 4.5                  | 12.1      | 5.9     |
| Access to schools                  |                                |                          |                  |                   |                      |           |         |
| Satisfied                          | 41.3                           | 62.9                     | 50.2             | 44.0              | 45.3                 | 41.1      | 48.5    |
| Neither satisfied nor dissatisfied | 2.3                            | 4.4                      | 5.4              | 4.3               | 4.6                  | 3.7       | 3.6     |
| Dissatisfied                       | 1.1                            | 2.0                      | 1.7              | 1.6               | 1.8                  | 3.5       | 1.6     |
| Not applicable                     | 55.3                           | 30.6                     | 42.6             | 50.1              | 48.2                 | 51.8      | 46.3    |
| Access to childcare                |                                |                          |                  |                   |                      |           |         |
| Satisfied                          | 15.1                           | 30.5                     | 23.7             | 22.9              | 23.0                 | 17.0      | 21.7    |
| Neither satisfied nor dissatisfied | 1.6                            | 3.3                      | 3.4              | 3.2               | 3.3                  | 3.1       | 2.6     |
| Dissatisfied                       | 1.4                            | 3.7                      | 2.0              | 2.1               | 2.2                  | 4.2       | 2.3     |
| Not applicable                     | 81.9                           | 62.5                     | 70.9             | 71.8              | 71.5                 | 75.7      | 73.4    |
| Access to entertainment            |                                |                          |                  |                   |                      |           |         |
| Satisfied                          | 62.9                           | 63.9                     | 50.2             | 66.0              | 61.3                 | 53.6      | 62.5    |
| Neither satisfied nor dissatisfied | 14.6                           | 18.8                     | 16.7             | 16.6              | 17.0                 | 17.1      | 16.5    |
| Dissatisfied                       | 9.3                            | 11.2                     | 15.4             | 10.4              | 11.9                 | 13.4      | 10.7    |
| Not applicable                     | 13.3                           | 6.1                      | 17.7             | 7.1               | 9.8                  | 15.9      | 10.3    |
| Total                              | 100.0                          | 100.0                    | 100.0            | 100.0             | 100.0                | 100.0     | 100.0   |
| NUMBER ('000)                      |                                |                          |                  |                   |                      |           |         |
| Households                         | 2 793.9                        | 1 890.3                  | 414.8            | 1 271.4           | 1 845.1              | 148.6     | 6 677.9 |

(a) Includes other renters. (b) Includes rent-free and other households. (c) The estimate has a relative standard error of 25% to 50%. (d) The estimate has a relative standard error greater than 50%.

Source: Australian Housing Survey, Housing Characteristics, Costs and Conditions (4182.0).

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## Introduction

In Australia, education and training are delivered in four sectors — preschool education; compulsory and post-compulsory schooling; vocational education and training; and higher education (the latter two sectors being known collectively as the tertiary sector).

The term ‘education’ has traditionally been used to denote the processes of obtaining knowledge, aptitudes, skills or socially valued qualities of character and behaviour. Education is regarded as a lifelong process, initiated at birth, developed in schooling and subsequent formal pathways of learning, and continued thereafter. Training is a more specific type of learning, whereby certain skills are developed for subsequent application in the workplace. The value of training lies in its practical relevance.

Historically, the larger part of education has usually been conducted in formal institutions, while training took place at the workplace (or ‘on-the-job’). While education and training maintain different orientations, the distinction between them is no longer clear-cut. In recent times the boundaries between the two have become less clearly delineated. Reforms and initiatives in the latter part of the twentieth century have seen education extend even further beyond formal institutions, and training beyond the workplace. Education and training are now both perceived to be parts of a lifelong learning process that enables individuals to take their places in a skilled and changing labour force, to lead fulfilling lives and to become active members of the community.

Because of the close relationship between education, training and employment, the participation of people in education as well as their transition into the labour force need to be monitored, as does participation in training and subsequent outcomes. This information is needed to assess the effectiveness of policies and programs designed to increase participation in education and improve skill levels in the labour force.

## Commonwealth and State government responsibilities in education

The governments of the six Australian States and the two Territories have the major responsibility

for education, including the administration and substantial funding of primary, secondary, and technical and further education (TAFE). The Commonwealth Government also plays a significant role in education policy, programs and funding. Total government outlays on education in 1995–96 was \$23,778 million (see later section, *Expenditure on education*), which represented 4.9% of Gross Domestic Product.

The State Governments administer their own systems of primary, secondary and TAFE education through government departments and agencies responsible to State Ministers.

The Commonwealth Government has direct responsibility for education in Australian Territories (Norfolk Island, Christmas Island and the Cocos (Keeling) Islands) under the Minister for Sport, Territories and Local Government. The Commonwealth Government has special responsibilities for Aboriginal and Torres Strait Islander people, migrants, international relations in education, and assistance for students. The Commonwealth Government also provides special grants to the States and Territories for areas of particular need.

The Commonwealth Government is principally responsible for the funding of higher education institutions, and provides supplementary funding for schools and for TAFE. Apart from its significant financial role, the Commonwealth is involved in promoting national consistency and coherence in the provision of education across Australia.

## Preschool education

All States and Territories have a policy of making preschool education available universally for children in the years prior to school entry. However, there is no national policy on the provision of preschool education. The age at which children may attend preschool varies across States and Territories, and considerable differences exist in the regulation, administration and organisation of preschools.

The 1996 ABS Child Care Survey estimated that 188,200 children less than five years old were attending preschool. This was a fall from the peak in 1993, when 194,400 children less than five years old were attending. In 1996, three and four year olds made up 92% of children at preschool, some of whom also attended other types of child care. In 1996, 15% of all children less than five years old were attending preschool.

## Primary and secondary education

### School attendance

School attendance is compulsory throughout Australia between the ages of 6 and 15 years (16 years in Tasmania).

Each State and Territory has its own specific requirements. Most children start primary school at about five years of age. Primary schooling generally begins with a preparatory or kindergarten year, followed by 12 grades to complete a full secondary course of study. While the final two years of schooling generally fall outside the compulsory stage of education, in 1996 83% of students remained at school until Year 11 and 71% remained until Year 12. Retention rates to senior school for Indigenous students, though rising, are less than three-quarters of those of non-Indigenous students, and fall more rapidly between Years 11 and 12.

### School organisation and operation

Primary schooling provides a general elementary program lasting for seven or eight years until Years 6 or 7. Students enter secondary schools at Year 7 in some State systems and at Year 8 in others. Most students attend schools reasonably near to their homes. Usually primary and secondary schools are separate institutions, but in some country areas there are area or central schools which provide both levels of schooling. Secondary education is generally comprehensive and coeducational in both government and non-government schools. Nevertheless, a significant, though declining, proportion of non-government schools are single sex institutions. In Tasmania and the Australian Capital Territory, attendance for the final two years of government schooling is at separate secondary colleges.

Generally, schools in Australia have a considerable degree of autonomy. Most State departments have established regional administrations which are responsible for matters such as planning school buildings and deploying staff, while a central curriculum unit provides general guidelines on course planning. In general, individual schools determine teaching and learning approaches within the given guidelines and offer various course options. In terms of assessment, some States have a completely school-based system, while others combine school-based assessment with external examinations.

### Curriculum development

Curriculum development in Australia is the responsibility of the State and Territory Governments. The Commonwealth Government plays an important role in promoting equity and social justice policies in the delivery of education, and encouraging national collaboration on school curriculum matters. Since 1988, the Commonwealth, State and Territory Ministers for Education have been working together on school curriculum issues.

Between 1989 and 1993 the Commonwealth, States and Territories collaborated to develop curriculum statements and profiles in each of eight agreed learning areas: English, mathematics, science, technology, studies of society and the environment, the arts, health and physical education, and languages other than English.

The statements provide an account of the aims and content of each area of learning as a framework for curriculum development in primary and secondary schooling. The profiles provide a broad outline of a sequence of students' development of knowledge, understandings and skills as a framework for assessing and reporting student progress and achievements.

All States and Territories are using the statements and profiles in some form for curriculum development, while incorporating variations which reflect local policies and priorities.

### Primary schooling

In primary education, the main emphasis is on the development of basic language and literacy skills, simple arithmetic, moral and social education, health training and some creative activities. In 1997 the Ministerial Council on Education, Employment, Training and Youth Affairs agreed to a new national literacy and numeracy goal: that every child leaving primary school should be numerate, and able to read, write and spell at an appropriate level, and a sub-goal: that every child commencing school from 1998 will achieve a minimum acceptable literacy and numeracy standard within four years. This will be achieved through a National Plan focusing on the crucial early years of schooling.

In the upper primary years there is development of the skills learned in the earlier years. English, mathematics, social studies, science, music, art



and craft, physical education and health are studied. There are also optional subjects such as religious instruction and, in some schools, foreign and community languages, and instrumental music.

Students in Australian primary schools usually have one teacher for most subjects, and are promoted each year on the basis of completing the previous year, rather than on achievement. In schools where open plan learning styles have been adopted, the method of team teaching (more than one teacher to a class) and multi-age grouping of students is sometimes practised.

### Secondary schooling

In secondary education, in some systems the first one or two years of secondary school consist of a general program which is followed by all students, although there may be some electives. In later years, a basic core of subjects is retained, with students being able to select additional optional subjects. In other systems, students select options from the beginning of secondary school.

The core subjects of the compulsory years, in all systems, involve the eight key learning areas. Optional subjects may include, for example, a foreign language, a further humanities or social science subject, commerce, art, crafts, music, home economics, a manual arts subject, agriculture, physical education or health education.

Students in Australian secondary schools generally have a different teacher for each separate subject area, though, as in primary schools, variations may occur where open plan or more flexible methods have been adopted. Promotion is, again, generally chronological.

In senior secondary years, a wider range of options is available in the larger schools and there is an increasing trend towards encouraging individual schools to develop courses suited to the needs and interests of their students, subject to accreditation and moderation procedures. There is also an increasing emphasis on the incorporation of vocational programs into the

senior secondary curriculum. Under the Australian Vocational Training System, students at school may obtain vocational education and training sector certificates as part of their senior study and undertake some parts of their programs in the workplace.

Examinations and assessments at each level are carried out by individual schools, although external examinations exist in some systems at the Year 10 and/or Year 12 levels. Students reaching the minimum school leaving age may leave school and seek employment, or enrol in a vocational course in a TAFE institution or a private business college. For many TAFE courses, completion of Year 10 of secondary school is a minimum entry requirement. For those continuing to the end of secondary school (Year 12), opportunities for further study are available in higher education institutions, TAFE institutions and other tertiary institutions. Students' eligibility to enter higher education institutions is assessed during, or at the end of, the final two years of secondary schooling.

An amount of \$207 million was provided in the 1996–97 Budget to establish New Apprenticeships over the period to 1999–2000. New Apprenticeships will expand apprenticeship and traineeship opportunities beyond traditional occupations into industries with new growth and employment potential.

New Apprenticeships will deliver national qualifications and can be accessed through Australian Workplace Agreements, Certified Agreements and Industry Awards. They are becoming available to school students on a part time basis. Reforms being introduced in 1998 include user choice of training provider and one-stop-shop support services for people accessing apprenticeships and traineeships.

### Number of schools, students and teaching staff

Of the 9,630 schools operating in Australia in 1996, 7,088 (74%) were government schools operated by the State Directors-General of Education (or equivalent) and 2,542 (26%) were non-government schools (see table 10.1).

## 10.1 SCHOOLS, STUDENTS AND TEACHING STAFF, August 1996

|                          | Government schools | Non-government schools |          |         |         | All schools |
|--------------------------|--------------------|------------------------|----------|---------|---------|-------------|
|                          |                    | Anglican               | Catholic | Other   | Total   |             |
|                          | no.                | no.                    | no.      | no.     | no.     | no.         |
| Schools                  | 7 088              | 124                    | 1 694    | 724     | 2 542   | 9 630       |
| Students                 |                    |                        |          |         |         |             |
| Males                    | 1 136 634          | 48 196                 | 309 971  | 105 942 | 464 109 | 1 600 743   |
| Females                  | 1 084 923          | 43 749                 | 305 601  | 107 999 | 457 349 | 1 542 272   |
| Persons                  | 2 221 557          | 91 945                 | 615 572  | 213 941 | 921 458 | 3 143 015   |
| FTE of teaching staff(a) |                    |                        |          |         |         |             |
| Males                    | 51 090             | 3 166                  | 12 102   | 6 206   | 21 474  | 72 564      |
| Females                  | 92 859             | 4 104                  | 24 799   | 9 646   | 38 549  | 131 408     |
| Persons                  | 143 949            | 7 270                  | 36 902   | 15 851  | 60 023  | 203 972     |

(a) Full-time teaching staff plus full-time equivalent (FTE) of part-time teaching staff.

Source: *Schools, Australia* (4221.0).

## 10.2 STUDENTS, By Category of School and Sex

|                        | August 1991 | July 1992 | July 1993 | July 1994 | August 1995 | August 1996 |
|------------------------|-------------|-----------|-----------|-----------|-------------|-------------|
|                        | no.         | no.       | no.       | no.       | no.         | no.         |
| Government schools     |             |           |           |           |             |             |
| Males                  | 1 137 101   | 1 145 848 | 1 141 627 | 1 133 490 | 1 129 599   | 1 136 634   |
| Females                | 1 080 125   | 1 088 235 | 1 086 429 | 1 081 448 | 1 078 254   | 1 084 923   |
| Persons                | 2 217 226   | 2 234 083 | 2 228 056 | 2 214 938 | 2 207 853   | 2 221 557   |
| Non-government schools |             |           |           |           |             |             |
| Males                  | 431 414     | 435 871   | 439 003   | 445 751   | 454 324     | 464 109     |
| Females                | 426 497     | 429 012   | 431 316   | 438 691   | 447 160     | 457 349     |
| Persons                | 857 911     | 864 883   | 870 319   | 884 442   | 901 484     | 921 458     |
| All schools            |             |           |           |           |             |             |
| Males                  | 1 568 515   | 1 581 719 | 1 580 630 | 1 579 241 | 1 583 923   | 1 600 743   |
| Females                | 1 506 622   | 1 517 247 | 1 517 745 | 1 520 139 | 1 525 414   | 1 542 272   |
| Persons                | 3 075 137   | 3 098 966 | 3 098 375 | 3 099 380 | 3 109 337   | 3 143 015   |

Source: *Schools, Australia* (4221.0).

## 10.3 NUMBER OF STUDENTS, By Level of Education(a) — August 1996

| Level/year of education       | Government schools<br>no. | Non-government schools |                 |                |                | All schools      |                  |                  |
|-------------------------------|---------------------------|------------------------|-----------------|----------------|----------------|------------------|------------------|------------------|
|                               |                           | Anglican<br>no.        | Catholic<br>no. | Other<br>no.   | Total<br>no.   | Males<br>no.     | Females<br>no.   | Persons<br>no.   |
| <b>Primary</b>                |                           |                        |                 |                |                |                  |                  |                  |
| Pre-year 1(b)                 | 139 329                   | 2 485                  | 39 392          | 9 947          | 51 824         | 98 369           | 92 784           | 191 153          |
| Year 1                        | 196 062                   | 3 576                  | 50 745          | 13 491         | 67 812         | 136 101          | 127 773          | 263 874          |
| Year 2                        | 193 326                   | 3 483                  | 49 718          | 13 247         | 66 448         | 132 951          | 126 823          | 259 774          |
| Year 3                        | 188 183                   | 3 742                  | 48 506          | 13 261         | 65 509         | 129 627          | 124 065          | 253 692          |
| Year 4                        | 186 260                   | 4 024                  | 48 450          | 13 510         | 65 984         | 129 052          | 123 192          | 252 244          |
| Year 5                        | 187 820                   | 4 907                  | 48 415          | 14 103         | 67 425         | 130 558          | 124 687          | 255 245          |
| Year 6                        | 187 695                   | 5 471                  | 48 910          | 14 582         | 68 963         | 130 991          | 125 667          | 256 658          |
| Year 7 (Qld, SA, WA, NT)      | 74 762                    | 2 490                  | 15 338          | 6 294          | 24 122         | 50 810           | 48 074           | 98 884           |
| Ungraded                      | 13 969                    | 6                      | 418             | 2 252          | 2 676          | 10 530           | 6 115            | 16 645           |
| <b>Total primary</b>          | <b>1 367 406</b>          | <b>30 184</b>          | <b>349 892</b>  | <b>100 687</b> | <b>480 763</b> | <b>948 989</b>   | <b>899 180</b>   | <b>1 848 169</b> |
| <b>Secondary</b>              |                           |                        |                 |                |                |                  |                  |                  |
| Year 7 (NSW, Vic., Tas., ACT) | 102 904                   | 6 356                  | 34 921          | 12 271         | 53 548         | 79 940           | 76 512           | 156 452          |
| Year 8                        | 170 761                   | 11 527                 | 53 073          | 21 753         | 86 353         | 131 814          | 125 300          | 257 114          |
| Year 9                        | 168 215                   | 11 269                 | 50 798          | 21 034         | 83 101         | 128 227          | 123 089          | 251 316          |
| Year 10                       | 158 630                   | 11 372                 | 48 341          | 20 851         | 80 564         | 121 459          | 117 735          | 239 194          |
| Year 11                       | 129 425                   | 11 119                 | 41 369          | 18 691         | 71 179         | 98 149           | 102 455          | 200 604          |
| Year 12                       | 107 042                   | 10 084                 | 36 598          | 17 005         | 63 687         | 80 682           | 90 047           | 170 729          |
| Ungraded                      | 17 174                    | 34                     | 580             | 1 649          | 2 263          | 11 483           | 7 954            | 19 437           |
| <b>Total secondary</b>        | <b>854 151</b>            | <b>61 761</b>          | <b>265 680</b>  | <b>113 254</b> | <b>440 695</b> | <b>651 754</b>   | <b>643 092</b>   | <b>1 294 846</b> |
| <b>Total</b>                  | <b>2 221 557</b>          | <b>91 945</b>          | <b>615 572</b>  | <b>213 941</b> | <b>921 458</b> | <b>1 600 743</b> | <b>1 542 272</b> | <b>3 143 015</b> |

(a) As from 1990 students attending special schools have not been separately identified and have been allocated to either primary or secondary level of education. (b) Pre-year 1 does not exist in Queensland or Western Australia.

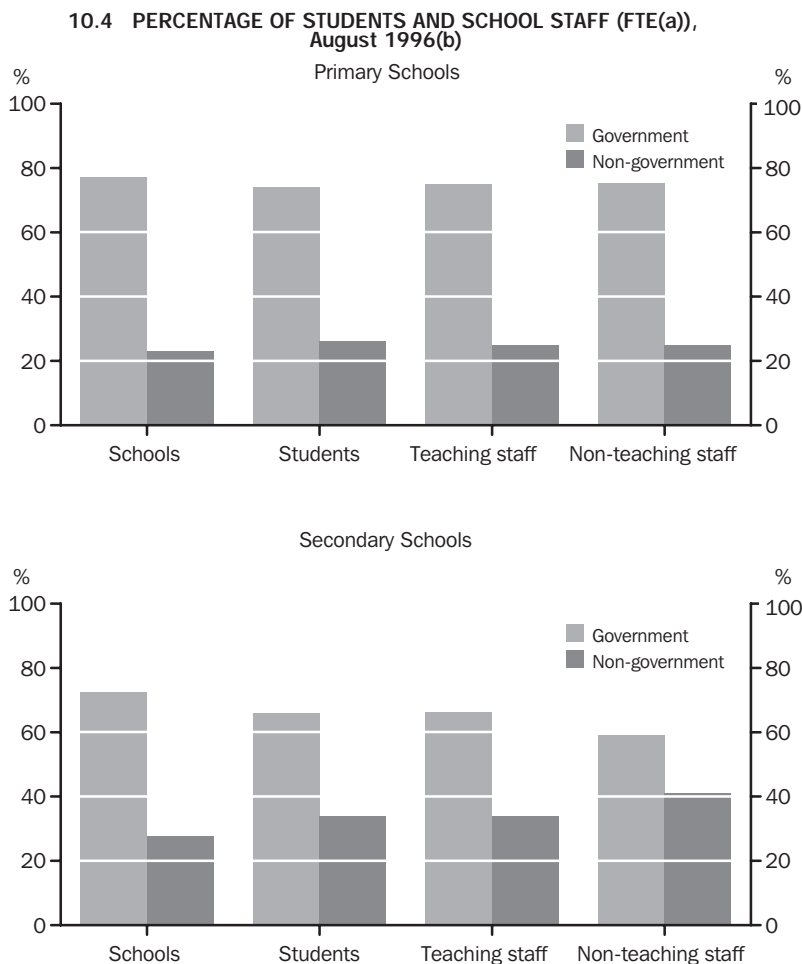
Source: *Schools, Australia* (4221.0).

In August 1996, the number of full-time students attending primary and secondary schools totalled 3,143,015, comprising 2,221,557 (71%) in government schools and 921,458 (29%) in non-government schools. The number of full-time students attending government schools increased by 13,704 (0.6%) from the 2,207,853 attending in 1995. The number of full-time students attending non-government schools

increased by 19,974 (2.2%) from the 901,484 attending in 1995 (see table 10.2).

Table 10.3 shows the number of students at August 1996 by level of education.

Graph 10.4 shows the proportions of students and school staff in government and non-government schools, for primary and secondary schools.



(a) Full-time teaching staff plus full-time equivalent of part-time teaching staff.  
(b) Combined Primary/Secondary and Special schools are not included; however, the associated students and staff are included.

Source: *Schools, Australia (4221.0)*.

**Other schooling arrangements**

Children may be exempted from the requirement of compulsory attendance if they live too far from a school or suffer a physical disability. These children receive tuition through a variety of educational delivery mechanisms, including correspondence, information and communication technologies, and Schools of the Air.

Children of some Indigenous groups in remote areas of the Northern Territory, who have moved away from larger centres into small decentralised communities called outstations or homeland centres, receive schooling from

Indigenous teaching assistants supported by visiting teachers from established schools.

Special education is provided by State Governments and non-government authorities in specialist schools, in special classes or units in regular schools, or by withdrawal from regular classes for periods of intensive assistance by special staff. In all States, and particularly in New South Wales, Queensland and Victoria, parents have formed voluntary organisations to establish additional schools catering for their children’s special needs. The Commonwealth Government provides funds to State and non-government authorities and community groups to assist in

the provision of services and upgrading of special education facilities.

Boarding facilities are available at some non-government schools, mainly in the larger towns and cities. A small number of government schools, in particular those catering for groups such as Indigenous people, have residential hostels close by.

### Apparent retention rates

Apparent retention rates are an important measure of performance of education systems and related government policies. The apparent retention rate is the percentage of students of a given cohort group who continued to a particular level/year of education. In graph 10.5, apparent retention rates have been calculated for students who continued to Year 12 from their respective cohort group at the commencement of their secondary schooling.

The apparent retention rate of secondary school students to Year 12 fell from 72.2% in 1995 to 71.3% in 1996. As in previous years, the retention rate for female students (77.0%) was higher than the corresponding rate for males (65.9%). The rate varied between States and Territories, ranging from 41.0% in the Northern Territory to 91.3% in the Australian Capital Territory. The apparent retention rate decreased between 1995 and 1996 in all States and Territories except Victoria (75.0% to 75.3%), Queensland (76.3% to 76.5%) and the Australian Capital Territory (91.1% to 91.3%).

Care should be taken in interpreting apparent retention rates since a range of factors affecting their calculation has not been taken into account. At the national level these include the effects of: students who repeat a year of education, migration, and other changes to the school population, such as full-fee paying overseas students.

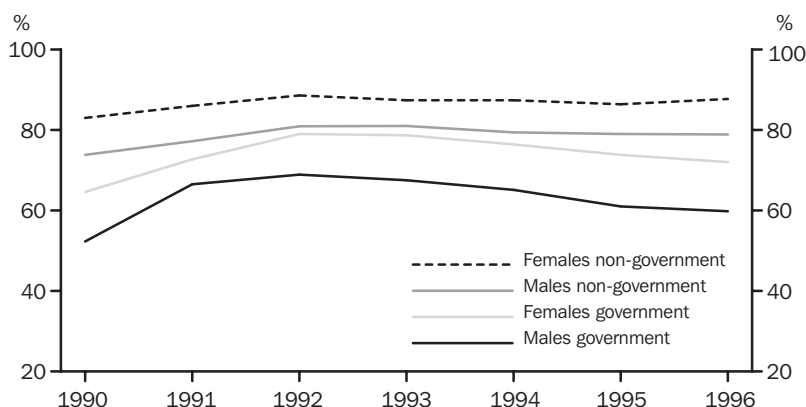
Comparisons between government and non-government schools should be made with caution because of the net transfer of students from government to non-government schools, which tends to inflate the non-government school retention rates and reduce the government school rates.

### Funding of schools

In 1995–96, Australian governments outlayed \$13,163 million on primary and secondary education, and a further \$1,216 million on preschool and other special education. They also spent large sums on other aspects of schooling such as transporting students. State/Territory and local governments provided 72% of the government funding for preschool, primary, secondary, and other special education, and all of the government costs of student transportation.

Major responsibility for funding government primary and secondary schools lies with State Governments, which provide about 90% of schools' running costs. The Commonwealth contribution represents about 10%. Data published by the Ministerial Council on Education, Employment, Training and Youth

10.5 APPARENT RETENTION RATES TO YEAR 12



Source: *Schools, Australia* (4221.0).

Affairs show that in 1994 non-government schools derived 44% of their income from private sources, 39% from the Commonwealth Government, and 17% from State grants.

Non-government schools operate under conditions determined by government authorities, usually registration boards, in each State and Territory. These conditions require that minimum education standards are met and that the schools have satisfactory premises. The majority of non-government schools are Catholic, and there is a Catholic Education Commission in each State and Territory and at the national level. Most other non-government schools are under the auspices of, or run by, other religious denominations.

Primary and secondary education is free in government schools in all States and Territories. Fees may be charged, however, for the hire of text books and other school equipment, particularly in secondary schools.

Most State Governments provide financial assistance to parents under specified conditions for educational expenses. Assistance includes various types of scholarships, bursaries, transport and boarding allowances, many of which are intended to assist low-income families. The Commonwealth Government also provides a number of schemes of assistance to facilitate access to education.

## **Tertiary education**

Tertiary education is mainly provided in universities, TAFE institutions and other Vocational Education and Training (VET) institutions such as theological colleges, private business and commercial colleges and secretarial colleges.

There are 36 public institutions of higher education in the Unified National System (UNS) and one private university (Bond University in Queensland) recognised by the Australian Vice-Chancellors' Committee (AVCC). Institutions within the UNS receive Commonwealth funding according to an academic profile agreed between them and the Government. In addition, there are a number of

smaller public institutions outside the UNS which receive Commonwealth funding on a contract basis, and one other private institution (Notre Dame University in Western Australia), all of which are teaching at university level.

Apart from the Australian National University, the University of Canberra and the Australian Maritime College (not a member of the UNS), which are established under Commonwealth legislation, Australian universities operate under State legislation. They are autonomous bodies responsible for their own governance and make their own decisions on, for example, matters of allocation of their funding, staffing and academic courses.

In 1996, there were 18 government training organisations (in addition to private providers) that administered and/or delivered VET courses, covering the 1,132 TAFE and other government training provider locations delivering VET training in that year. There were also 514 community centres and 397 private providers delivering VET. Some VET training is also provided by libraries, community centres and churches. In addition, there has been a concerted effort nationally to increase the range of providers and types of VET training which can be undertaken in the final two, post-compulsory years of schooling. For example, a number of higher education institutions now provide VET.

Primary responsibility for administration of the TAFE system lies with the State and Territory Governments. Funding is provided primarily by the State and Territory Governments (61% in 1995–96), with additional funds being provided by the Commonwealth Government (39%).

## **Higher education**

During 1996, 79% of all higher education staff were employed full-time, 9% part-time and 12% as casuals (see table 10.6). Of persons employed full-time, 44% were female. Only the Northern Territory had a higher proportion of full-time female staff (52%) than full-time male staff. Overall, females were much more likely than males to work part-time. Three-quarters of all part-time higher education staff were female. In no State or Territory did the proportion of male part-time staff exceed 30%.

## 10.6 HIGHER EDUCATION STAFF(a), 1996

|              | NSW           | Vic.          | Qld           | SA           | WA           | Tas.         | NT         | ACT          | Multi-State(b) | Aust.         |
|--------------|---------------|---------------|---------------|--------------|--------------|--------------|------------|--------------|----------------|---------------|
|              | no.           | no.           | no.           | no.          | no.          | no.          | no.        | no.          | no.            | no.           |
| Full-time    |               |               |               |              |              |              |            |              |                |               |
| Males        | 10 979        | 8 878         | 6 299         | 2 846        | 3 577        | 965          | 260        | 2 612        | 282            | 36 697        |
| Females      | 8 332         | 7 130         | 5 215         | 2 180        | 2 709        | 552          | 282        | 1 749        | 409            | 28 557        |
| Persons      | 19 311        | 16 008        | 11 514        | 5 027        | 6 285        | 1 516        | 541        | 4 361        | 691            | 65 254        |
| Part-time    |               |               |               |              |              |              |            |              |                |               |
| Males        | 513           | 565           | 286           | 152          | 213          | 45           | 4          | 91           | 16             | 1 885         |
| Females      | 1 522         | 1 690         | 724           | 525          | 624          | 109          | 18         | 279          | 72             | 5 563         |
| Persons      | 2 035         | 2 255         | 1 009         | 678          | 837          | 154          | 22         | 370          | 88             | 7 449         |
| Casual       |               |               |               |              |              |              |            |              |                |               |
| Persons      | 2 995         | 2 813         | 1 766         | 691          | 1 075        | 200          | 80         | 441          | 124            | 10 185        |
| <b>Total</b> | <b>24 341</b> | <b>21 076</b> | <b>14 289</b> | <b>6 395</b> | <b>8 197</b> | <b>1 871</b> | <b>643</b> | <b>5 173</b> | <b>903</b>     | <b>82 888</b> |

(a) Full-time staff plus full-time equivalent of part-time and casual staff. (b) Australian Catholic University.

Source: Department of Employment, Education, Training and Youth Affairs, 'Selected Higher Education Staff Statistics, 1996'.

Students commencing higher education courses will have completed a full secondary education, or will have demonstrated that they have a high probability of successfully completing a course. There is keen demand for higher education places at most institutions.

Higher education institutions offer a great variety of courses embracing such areas as agriculture, architecture, arts, business, dentistry, economics, education, engineering, health, law, medicine, music, science and veterinary science. Fields of study with the largest numbers of award course students in 1996 were Arts, humanities and social sciences (23%); Business, administration and economics (23%); and Science (15%) (see table 10.7).

Higher education institutions are funded by the Commonwealth under the *Higher Education Funding Act 1988*. In 1995, the operating revenue of UNS institutions amounted to some \$7,535 million, 57% of which came from Commonwealth Government Grants. Commonwealth Government funding is also provided to higher education institutions through various research programs, mostly on the advice of the Australian Research Council (ARC).

In addition to government funding, institutions receive payments from students who are required to contribute to the cost of their education through the Higher Education Contribution Scheme (HECS), and from other fee paying students. In 1995, 12% of operating revenue was raised from HECS. Fees and charges (excluding HECS) accounted for a further 12% of income. Other higher education income sources include investments, State Government grants, donations and bequests.

The basic undergraduate course at most institutions is a bachelor degree course of three or four years' duration. At some institutions, courses may also be offered at the diploma or advanced diploma level. All institutions in the UNS also offer postgraduate level study. One to two years of full-time postgraduate study are required for a master's degree and three to five years for a doctoral degree. Postgraduate diplomas and certificates are offered in some disciplines. In 1996, 75% of higher education students were enrolled in bachelor courses, with a further 21% enrolled in higher degree and other postgraduate courses (see table 10.7).

All UNS institutions provide full-time and part-time courses. In addition, some institutions offer courses which associate full-time study with periods of employment. Distance education courses are also offered. Students can also enrol in higher education courses through the Open Learning Agency of Australia Pty Ltd (OLAA). In 1996, there were 5,675 unit enrolments in OLAA programs, compared with 5,799 in 1995 and 5,080 in 1994.

The system of tuition in higher education institutions is normally by means of lectures, tutorials, seminars and supervised practical work. In general, assessment of a student's progress is made by examination and/or completion of prescribed coursework or of individual research.

The accompanying tables on higher education show a range of statistics about students and courses.

## 10.7 HIGHER EDUCATION STUDENTS, Level of Course and Field of Study — 1996

|                                             | Agriculture,<br>animal<br>husbandry | Architecture,<br>building | Arts, humanities<br>and social<br>sciences | Business,<br>administration,<br>economics | Education              |                |
|---------------------------------------------|-------------------------------------|---------------------------|--------------------------------------------|-------------------------------------------|------------------------|----------------|
|                                             | no.                                 | no.                       | no.                                        | no.                                       | no.                    |                |
| Higher doctorate                            | —                                   | —                         | —                                          | —                                         | 79                     |                |
| Doctorate                                   | 853                                 | 222                       | 5 742                                      | 1 787                                     | 2 145                  |                |
| Master's by research                        | 385                                 | 252                       | 3 568                                      | 802                                       | 1 177                  |                |
| Master's by coursework                      | 180                                 | 852                       | 7 651                                      | 15 625                                    | 7 780                  |                |
| Postgraduate qualifying/preliminary         | 18                                  | 67                        | 229                                        | 241                                       | 82                     |                |
| Graduate (post) diploma —<br>new area       | 296                                 | 523                       | 5 435                                      | 7 286                                     | 8 640                  |                |
| Graduate (post) diploma —<br>extension area | 94                                  | 297                       | 1 686                                      | 2 673                                     | 2 760                  |                |
| Graduate certificate                        | 55                                  | 351                       | 733                                        | 2 994                                     | 1 787                  |                |
| Bachelor's graduate entry                   | —                                   | 473                       | 868                                        | —                                         | 3 877                  |                |
| Bachelor's honours                          | 103                                 | 100                       | 4 129                                      | 832                                       | 232                    |                |
| Bachelor's pass                             | 6 294                               | 11 427                    | 111 078                                    | 108 633                                   | 39 796                 |                |
| Advanced diploma                            | 1 345                               | —                         | 534                                        | 268                                       | 764                    |                |
| Diploma                                     | 2 371                               | 140                       | 2 059                                      | 971                                       | 677                    |                |
| Other award course                          | 10                                  | —                         | 259                                        | 1 405                                     | 16                     |                |
| Enabling courses                            | 55                                  | —                         | 2 337                                      | 66                                        | 713                    |                |
| Non-award courses                           | —                                   | —                         | —                                          | —                                         | —                      |                |
| <b>Total courses</b>                        | <b>12 059</b>                       | <b>14 704</b>             | <b>146 308</b>                             | <b>143 583</b>                            | <b>70 525</b>          |                |
|                                             | Engineering,<br>surveying           | Health                    | Law, legal<br>studies                      | Science                                   | Veterinary<br>sciences | Total          |
|                                             | no.                                 | no.                       | no.                                        | no.                                       | no.                    | no.            |
| Higher doctorate                            | 1                                   | 87                        | 11                                         | 2                                         | —                      | 180            |
| Doctorate                                   | 2 318                               | 2 687                     | 295                                        | 6 445                                     | 202                    | 22 696         |
| Master's by research                        | 1 332                               | 1 058                     | 189                                        | 2 023                                     | 69                     | 10 855         |
| Master's by coursework                      | 2 314                               | 5 307                     | 2 090                                      | 3 330                                     | 74                     | 45 203         |
| Postgraduate qualifying/preliminary         | 71                                  | 411                       | 77                                         | 225                                       | 2                      | 1 423          |
| Graduate (post) diploma —<br>new area       | 725                                 | 3 767                     | 753                                        | 3 469                                     | 3                      | 30 897         |
| Graduate (post) diploma —<br>extension area | 624                                 | 3 579                     | 534                                        | 1 189                                     | 4                      | 13 440         |
| Graduate certificate                        | 293                                 | 841                       | 339                                        | 407                                       | 1                      | 7 801          |
| Bachelor's graduate entry                   | —                                   | 347                       | 582                                        | —                                         | —                      | 6 147          |
| Bachelor's honours                          | 860                                 | 662                       | 372                                        | 3 721                                     | 14                     | 11 025         |
| Bachelor's pass                             | 39 227                              | 53 327                    | 17 953                                     | 68 558                                    | 1 289                  | 457 582        |
| Advanced diploma                            | 95                                  | 131                       | —                                          | 589                                       | —                      | 3 726          |
| Diploma                                     | 847                                 | 847                       | 1 034                                      | 1 184                                     | —                      | 10 130         |
| Other award course                          | 14                                  | 102                       | 766                                        | 533                                       | —                      | 3 105          |
| Enabling courses                            | 12                                  | 109                       | —                                          | 311                                       | —                      | 3 603          |
| Non-award courses                           | —                                   | —                         | —                                          | —                                         | —                      | 6 281          |
| <b>Total courses</b>                        | <b>48 733</b>                       | <b>73 262</b>             | <b>24 995</b>                              | <b>91 986</b>                             | <b>1 658</b>           | <b>634 094</b> |

Source: Department of Employment, Education, Training and Youth Affairs, 'Selected Higher Education Student Statistics, 1996'.

As can be drawn from table 10.8, the proportion of higher education students who are female has risen from 53% in 1990 to 54% in 1996. Table 10.8 also illustrates that higher education students are predominantly in the younger age groups (59% were 24 years old or under in 1996).

In 1996, 59% of students were enrolled in full-time study, 28% in part-time study and 13%

in external studies (including non-award courses). Between 1990 and 1996, the total number of students rose 31%. The greatest rate of growth (61%) was for females studying externally. This exceeded the growth rate for males (55%) (see table 10.9).



**10.8 HIGHER EDUCATION STUDENTS(a), Age and Sex**

|                     | 1990    | 1991    | 1992    | 1993    | 1994    | 1995    | 1996    |
|---------------------|---------|---------|---------|---------|---------|---------|---------|
|                     | no.     | no.     | no.     | no.     | no.     | no.     | no.     |
| <b>19 and under</b> |         |         |         |         |         |         |         |
| Males               | 71 254  | 74 820  | 71 186  | 68 660  | 69 757  | 70 683  | 73 151  |
| Females             | 90 589  | 96 617  | 93 427  | 90 794  | 91 958  | 93 997  | 98 639  |
| Persons             | 161 843 | 171 437 | 164 613 | 159 454 | 161 715 | 164 680 | 171 790 |
| <b>20–24</b>        |         |         |         |         |         |         |         |
| Males               | 71 902  | 80 304  | 87 542  | 92 101  | 92 415  | 94 182  | 97 331  |
| Females             | 69 273  | 79 967  | 89 877  | 97 397  | 98 810  | 101 455 | 106 550 |
| Persons             | 141 175 | 160 271 | 177 419 | 189 498 | 191 225 | 195 637 | 203 881 |
| <b>25–29</b>        |         |         |         |         |         |         |         |
| Males               | 30 153  | 32 334  | 34 152  | 35 397  | 36 239  | 37 661  | 39 963  |
| Females             | 27 447  | 30 693  | 32 557  | 33 671  | 35 051  | 37 858  | 41 306  |
| Persons             | 57 600  | 63 027  | 66 709  | 69 068  | 71 290  | 75 519  | 81 269  |
| <b>30 and over</b>  |         |         |         |         |         |         |         |
| Males               | 56 111  | 62 218  | 67 673  | 71 828  | 73 568  | 76 294  | 79 427  |
| Females             | 68 346  | 77 585  | 82 951  | 85 769  | 87 598  | 92 047  | 97 727  |
| Persons             | 124 457 | 139 803 | 150 624 | 157 597 | 161 166 | 168 341 | 177 154 |
| <b>Total</b>        |         |         |         |         |         |         |         |
| Males               | 229 420 | 249 676 | 260 553 | 267 986 | 271 979 | 278 820 | 289 872 |
| Females             | 255 655 | 284 862 | 298 812 | 307 631 | 313 417 | 325 357 | 344 222 |
| Persons             | 485 075 | 534 538 | 559 365 | 575 617 | 585 396 | 604 177 | 634 094 |

(a) Includes students in enabling and non-award courses.

Source: Department of Employment, Education, Training and Youth Affairs, 'Selected Higher Education Student Statistics, 1996'.

**10.9 HIGHER EDUCATION STUDENTS, Type of Enrolment and Sex**

|                  | 1990    | 1991    | 1992    | 1993    | 1994    | 1995    | 1996    |
|------------------|---------|---------|---------|---------|---------|---------|---------|
|                  | no.     | no.     | no.     | no.     | no.     | no.     | no.     |
| <b>Internal</b>  |         |         |         |         |         |         |         |
| <b>Full-time</b> |         |         |         |         |         |         |         |
| Males            | 140 247 | 153 210 | 158 175 | 160 357 | 161 374 | 165 288 | 171 680 |
| Females          | 159 264 | 175 197 | 181 029 | 183 222 | 183 615 | 189 996 | 200 636 |
| Persons          | 299 511 | 328 407 | 339 204 | 343 579 | 344 989 | 355 284 | 372 316 |
| <b>Part-time</b> |         |         |         |         |         |         |         |
| Males            | 65 279  | 71 652  | 75 867  | 79 548  | 80 212  | 80 767  | 81 259  |
| Females          | 67 573  | 77 557  | 83 449  | 88 534  | 91 213  | 92 928  | 95 431  |
| Persons          | 132 852 | 149 209 | 159 316 | 168 082 | 171 425 | 173 695 | 176 690 |
| <b>External</b>  |         |         |         |         |         |         |         |
| Males            | 23 894  | 24 814  | 26 511  | 28 081  | 30 393  | 32 765  | 36 933  |
| Females          | 28 818  | 32 108  | 34 334  | 35 875  | 38 589  | 42 433  | 48 155  |
| Persons          | 52 712  | 56 922  | 60 845  | 63 956  | 68 982  | 75 198  | 85 088  |
| <b>Total</b>     |         |         |         |         |         |         |         |
| Males            | 229 420 | 249 676 | 260 553 | 267 986 | 271 979 | 278 820 | 289 872 |
| Females          | 255 655 | 284 862 | 298 812 | 307 631 | 313 417 | 325 357 | 344 222 |
| Persons          | 485 075 | 534 538 | 559 365 | 575 617 | 585 396 | 604 177 | 634 094 |

Source: Department of Employment, Education, Training and Youth Affairs, 'Selected Higher Education Student Statistics, 1996'.

**Vocational education and training**

Most vocational education and training in Australia is provided in government-administered colleges, generally referred to as Colleges of Technical and Further Education (TAFE) or, to a lesser extent,

Institutes of Technology. Vocational education and training is also provided in some higher education institutions, schools and agricultural colleges, by adult and community education authorities and enterprises, and private providers of education such as business colleges.

The TAFE institutions offer a wide range of non-vocational and vocational training programs, ranging from recreation and leisure, through basic employment and educational preparation to trades, para-professional and professional levels. Training programs are classified according to 12 fields of study on the basis of similar vocational (or non-vocational) emphasis or subject matter orientation, which are broadly consistent with the fields of study covered by higher education institutions.

Primary responsibility for administration of the TAFE system lies with the State and Territory Governments. In 1996, recurrent and operating funding of the TAFE system was about \$3,600 million, of which the States and Territories provided 57% and the Commonwealth 24%, the remaining 19% coming from fees and other sources. Capital funding was \$382 million, of which the Commonwealth provided 61% and the States 39%.

All States and Territories charge most students some form of administration fee for TAFE courses, which varies according to the type of course and its duration. Nationally, in 1996 around 4% of recurrent and operating revenue for TAFE was provided by student fees and charges. Another 10% was received from full fee paying overseas clients, from employers and from individuals (excluding individual student fees).

The Commonwealth Government and the State Governments are committed to the provision of quality vocational education and training in Australia, and agreed in 1992 to establish a national vocational education and training system. Under this new system, a Ministerial Council, chaired by the Commonwealth Minister, determines national policy and priorities, strategic directions, funding arrangements and planning processes for vocational education and training, on the advice of the Australian National Training Authority (ANTA).

Under the new national system, State training agencies manage the delivery of vocational education and training in a manner consistent with the national strategic plan. These agencies are accountable to their State Ministers for operational matters, and to the Ministerial Council on matters of national policy.

Table 10.10 shows the number of VET teachers working in TAFEs and at other training providers. Of all VET teachers, 58% are employed full-time and 42% part-time. Of all full-time VET teaching staff, 60% are male. In

contrast, 67% of part-time VET teachers are female.

#### 10.10 VOCATIONAL EDUCATION TEACHING STAFF, 1996-97(a)

|         | Full-time staff<br>'000 | Part-time staff<br>'000 | All teaching staff<br>'000 |
|---------|-------------------------|-------------------------|----------------------------|
| Males   | 11.0                    | 4.6                     | 15.6                       |
| Females | 7.4                     | 9.0                     | 16.3                       |
| Persons | 18.4                    | 13.5                    | 31.9                       |

(a) Average over the financial year.

Source: ABS, unpublished data, Labour Force Survey.

#### 10.11 VOCATIONAL EDUCATION AND TRAINING CLIENTS, Streams 2100-4500(a) — 1996

|              | Males<br>no.   | Females<br>no. | Persons<br>no.       |
|--------------|----------------|----------------|----------------------|
| Age group    |                |                |                      |
| Under 16     | 11 123         | 9 551          | 20 738               |
| 16           | 24 664         | 19 000         | 43 910               |
| 17           | 31 871         | 22 892         | 55 100               |
| 18           | 42 975         | 31 141         | 74 931               |
| 19           | 42 087         | 27 833         | 70 432               |
| 20-24        | 134 356        | 101 476        | 236 628              |
| 25-29        | 86 265         | 75 275         | 161 823              |
| 30-39        | 145 932        | 141 958        | 288 186              |
| 40-49        | 94 686         | 109 299        | 204 185              |
| 50-59        | 39 807         | 42 413         | 82 309               |
| 60-64        | 6 942          | 7 653          | 14 613               |
| 64 and over  | 8 311          | 9 732          | 18 057               |
| Not stated   | 28 002         | 31 766         | 83 667               |
| <b>Total</b> | <b>697 021</b> | <b>629 989</b> | <b>(b) 1 354 579</b> |

(a) Courses leading to a vocational award. (b) Total persons exceeds the sum of the sexes because sex was not stated for 28,398 students.

Source: National Centre for Vocational Education Research, 'Australian Vocational Education and Training Statistics, 1996: In Detail'.

Table 10.11 shows participation in vocational education and training programs (other than those which are higher education or school programs). Streams 2100-4500 are those courses that lead to a vocational award. A client is any individual participating in a specific enrolment or training contract with a specific organisation. The table shows the number of VET clients, the majority of whom were enrolled in TAFE institutions, by age group and sex, in 1996.

Clients may be enrolled in more than one activity. Table 10.12 shows the number of course enrolments in each field of study in 1996, by stream.

## 10.12 VOCATIONAL EDUCATION AND TRAINING COURSE ENROLMENTS, Stream and Field of Study — 1996

|                                             | Land and<br>marine<br>resources,<br>animal<br>husbandry | Architecture,<br>building | Art,<br>humanities<br>and social<br>sciences | Business<br>admin-<br>istration,<br>economics | Education     | Engineering,<br>surveying |
|---------------------------------------------|---------------------------------------------------------|---------------------------|----------------------------------------------|-----------------------------------------------|---------------|---------------------------|
| Stream                                      | no.                                                     | no.                       | no.                                          | no.                                           | no.           | no.                       |
| Recreation, leisure                         | 12 213                                                  | 18 830                    | 223 869                                      | 32 397                                        | 2 776         | 21 969                    |
| Basic employment skills                     | 25 919                                                  | 1 131                     | 37 441                                       | 11 422                                        | 9 535         | 8 095                     |
| Education preparation                       | 135                                                     | 69                        | 26 390                                       | 3 290                                         | 424           | 679                       |
| Operatives — initial                        | 26 818                                                  | 16 386                    | 17 890                                       | 80 721                                        | 4 974         | 29 508                    |
| Recognised trades                           |                                                         |                           |                                              |                                               |               |                           |
| Part exempt                                 | 269                                                     | 8 864                     | 1 789                                        | 174                                           | —             | 20 989                    |
| Complete                                    | 6 315                                                   | 33 041                    | 324                                          | 138                                           | —             | 65 770                    |
| Other skills                                |                                                         |                           |                                              |                                               |               |                           |
| Part exempt                                 | 11 130                                                  | 1 928                     | 7 507                                        | 42 155                                        | 2 663         | 10 494                    |
| Complete                                    | 16 420                                                  | 2 561                     | 11 226                                       | 62 300                                        | 4 381         | 28 328                    |
| Trade technician/supervisory                | 5 219                                                   | 9 444                     | 8 274                                        | 53 445                                        | 2 176         | 26 172                    |
| Para-professional                           |                                                         |                           |                                              |                                               |               |                           |
| Technician                                  | 113                                                     | 2 338                     | 3 299                                        | 15 942                                        | 641           | 2 857                     |
| Higher technician                           | 3 587                                                   | 9 525                     | 17 252                                       | 70 859                                        | 1 163         | 23 274                    |
| Professional                                | 20                                                      | 327                       | 2 635                                        | 16 236                                        | —             | 474                       |
| Operatives — post initial                   | 2 192                                                   | 2 625                     | 794                                          | 5 592                                         | 280           | 6 066                     |
| Trades/other skills — post initial          | 11 983                                                  | 9 105                     | 2 168                                        | 10 974                                        | 2 370         | 16 512                    |
| Trade technician/supervisory — post initial | 440                                                     | 332                       | 242                                          | 1 093                                         | 336           | 3 610                     |
| Para-professional                           |                                                         |                           |                                              |                                               |               |                           |
| Technician — post initial                   | —                                                       | 25                        | 28                                           | 4 314                                         | 1 881         | 664                       |
| Higher technician — post initial            | —                                                       | 138                       | 114                                          | 541                                           | 671           | 1 498                     |
| <b>Total excluding Recreation, leisure</b>  | <b>110 560</b>                                          | <b>97 839</b>             | <b>137 373</b>                               | <b>379 196</b>                                | <b>31 495</b> | <b>244 990</b>            |

|                                             | Health,<br>community<br>services | Law,<br>legal<br>studies | Science        | Veterinary<br>science,<br>animal care | Services,<br>hospitality,<br>transport<br>-ation | TAFE<br>multi-field<br>education | Total            |
|---------------------------------------------|----------------------------------|--------------------------|----------------|---------------------------------------|--------------------------------------------------|----------------------------------|------------------|
| Stream                                      | no.                              | no.                      | no.            | no.                                   | no.                                              | no.                              | no.              |
| Recreation, leisure                         | 104 903                          | 1 129                    | 14 776         | 443                                   | 36 493                                           | 76 926                           | 546 724          |
| Basic employment skills                     | 7 362                            | 30                       | 22 093         | 78                                    | 4 197                                            | 198 322                          | 325 625          |
| Education preparation                       | 1 636                            | 5                        | 2 058          | —                                     | 1 913                                            | 85 647                           | 122 246          |
| Operatives — initial                        | 44 185                           | 394                      | 54 473         | 1 023                                 | 38 936                                           | 36 551                           | 351 859          |
| Recognised trades                           |                                  |                          |                |                                       |                                                  |                                  |                  |
| Part exempt                                 | 42                               | —                        | 23             | —                                     | 5 897                                            | 3 027                            | 41 074           |
| Complete                                    | 334                              | 11                       | —              | —                                     | 24 215                                           | 43                               | 130 191          |
| Other skills                                |                                  |                          |                |                                       |                                                  |                                  |                  |
| Part exempt                                 | 15 337                           | 639                      | 837            | 106                                   | 15 382                                           | 5 159                            | 113 337          |
| Complete                                    | 12 101                           | 6 667                    | 12 431         | 751                                   | 27 307                                           | 2 243                            | 186 716          |
| Trade technician/supervisory                | 12 133                           | 121                      | 5 332          | 175                                   | 12 372                                           | 2 593                            | 137 456          |
| Para-professional                           |                                  |                          |                |                                       |                                                  |                                  |                  |
| Technician                                  | 5 189                            | 2 215                    | 2 770          | 64                                    | 1 419                                            | —                                | 36 847           |
| Higher technician                           | 19 493                           | 3 818                    | 7 274          | 338                                   | 9 889                                            | 235                              | 166 707          |
| Professional                                | 2 044                            | 145                      | 735            | —                                     | 1 505                                            | —                                | 24 121           |
| Operatives — post initial                   | 7 192                            | 116                      | 6 759          | —                                     | 3 791                                            | 9 468                            | 44 875           |
| Trades/other skills — post initial          | 6 042                            | 81                       | 4 247          | —                                     | 17 068                                           | 1 883                            | 82 433           |
| Trade technician/supervisory — post initial | 737                              | —                        | 892            | —                                     | 1 728                                            | 270                              | 9 680            |
| Para-professional                           |                                  |                          |                |                                       |                                                  |                                  |                  |
| Technician — post initial                   | 595                              | —                        | 439            | —                                     | 176                                              | 403                              | 8 525            |
| Higher technician — post initial            | 267                              | —                        | 351            | —                                     | 337                                              | 666                              | 4 585            |
| <b>Total excluding Recreation, leisure</b>  | <b>134 689</b>                   | <b>14 242</b>            | <b>120 714</b> | <b>2 537</b>                          | <b>166 132</b>                                   | <b>346 510</b>                   | <b>1 786 277</b> |

Source: National Centre for Vocational Education Research, 'Australian Vocational Education and Training Statistics, 1996: In Detail'.

# Education characteristics of the population

## Participation in education

A large proportion of persons in the age group 15–24 participate in education well beyond the compulsory school age of 15 years (16 years in Tasmania). Table 10.13 shows that, in September 1996, 69% of 17 year olds were still at school (up from 67% a year earlier), while a further 12% had moved on to tertiary education (up from 11% a year earlier). Of all 17 year olds, 81% were attending an educational institution, compared with 78% in 1995. By 19 years of age, most young adults had left school (only 2% remained), and nearly half (49%) were undertaking tertiary education.

## Education attendance and the labour force

The ABS Transition from Education to Work Survey in May 1996 found that an estimated 2,303,100 persons aged 15–64 years had attended an educational institution in the previous year to study for a recognised qualification (see table 10.14). At the time of the

survey, only 71% (1,632,900) were still attending. Included in this group were 72,300 persons who had changed from full-time to part-time study, and 45,500 of these were employed full-time.

Of the 670,100 persons who had ceased education since the previous year, 79% were employed, 14% were unemployed and the remaining 7% were not in the labour force.

Many persons were involved in both study and work. The 1,632,900 persons continuing at an educational institution in May 1996 included 868,700 employed (401,900 of these in full-time employment) and 108,100 unemployed. There were 26,600 persons who reported combining full-time study and full-time employment.

Graph 10.15 indicates the labour force status of students attending a course in May 1996 to gain a recognised educational qualification. The graph shows that although most school students were not in the labour force (62%), many were employed (31%). In contrast, only 26% of tertiary students were not in the labour force, and 68% were employed in May 1996.

10.13 EDUCATION PARTICIPATION RATES, Persons Aged 15–24 — September 1996

|                     | Age (years)  |              |              |              |              |              |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                     | 15           | 16           | 17           | 18           | 19           | 20           | 21           | 22           | 23           | 24           |
| Type of institution | %            | %            | %            | %            | %            | %            | %            | %            | %            | %            |
| Attending           |              |              |              |              |              |              |              |              |              |              |
| School              | 94.8         | 81.7         | 69.3         | 22.3         | 2.2          | *1.2         | *0.3         | *0.5         | —            | —            |
| Tertiary            |              |              |              |              |              |              |              |              |              |              |
| Full-time           | *0.3         | 2.8          | 5.9          | 28.7         | 34.7         | 29.8         | 25.8         | 16.6         | 10.1         | 7.7          |
| Part-time           | *0.6         | 2.3          | 5.7          | 10.0         | 11.9         | 13.8         | 10.1         | 13.9         | 9.3          | 10.0         |
| Total tertiary      | *0.9         | 5.1          | 11.6         | 38.7         | 46.6         | 43.6         | 35.9         | 30.5         | 19.4         | 17.7         |
| Total attending     | 95.7         | 86.7         | 80.8         | 61.0         | 48.8         | 44.8         | 36.2         | 31.0         | 19.5         | 17.7         |
| Not attending       | 4.3          | 13.3         | 19.2         | 39.0         | 51.2         | 55.2         | 63.8         | 69.0         | 80.5         | 82.3         |
| <b>Total</b>        | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

Source: Participation in Education, Australia (6272.0).

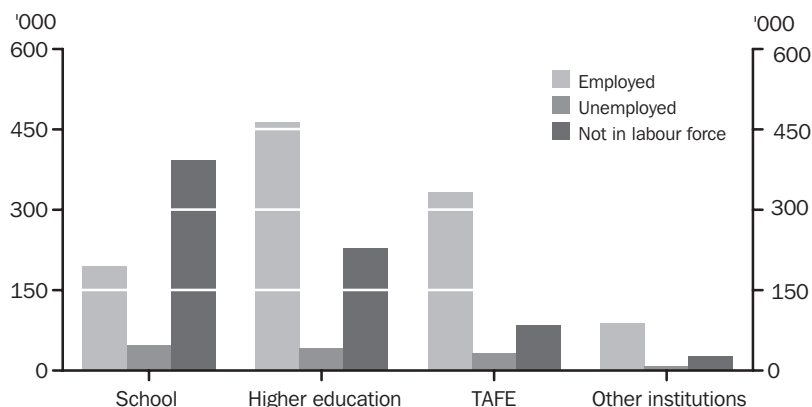
### 10.14 PERSONS AGED 15-64 WHO ATTENDED AN EDUCATIONAL INSTITUTION(a) IN 1995, Labour Force Status — May 1996

| Type of attendance                | Employed     |              |                | Unem-<br>ployed | Labour force   |              |                | Unem-<br>ployment<br>rate<br>% |
|-----------------------------------|--------------|--------------|----------------|-----------------|----------------|--------------|----------------|--------------------------------|
|                                   | Full-time    | Part-time    | Total          |                 | In             | Not in       | Total          |                                |
|                                   | '000         | '000         | '000           | '000            | '000           | '000         | '000           |                                |
| <b>ATTENDED FULL-TIME IN 1995</b> |              |              |                |                 |                |              |                |                                |
| Attending in 1996                 |              |              |                |                 |                |              |                |                                |
| Full-time                         | 22.8         | 392.1        | 414.9          | 81.0            | 495.9          | 618.0        | 1 113.9        | 16.3                           |
| Part-time                         | 45.5         | 12.3         | 57.8           | 9.4             | 67.1           | *5.2         | 72.3           | 14.0                           |
| Total                             | 68.3         | 404.4        | 472.7          | 90.4            | 563.0          | 623.2        | 1 186.2        | 16.1                           |
| Not attending in 1996             | 143.3        | 70.7         | 214.0          | 66.7            | 280.8          | 27.0         | 307.8          | 23.8                           |
| <b>Total</b>                      | <b>211.6</b> | <b>475.1</b> | <b>686.7</b>   | <b>157.1</b>    | <b>843.8</b>   | <b>650.2</b> | <b>1 494.0</b> | <b>18.6</b>                    |
| <b>ATTENDED PART-TIME IN 1995</b> |              |              |                |                 |                |              |                |                                |
| Attending in 1996                 |              |              |                |                 |                |              |                |                                |
| Full-time                         | *3.8         | 7.8          | 11.6           | *3.0            | 14.6           | 8.8          | 23.4           | *20.5                          |
| Part-time                         | 329.8        | 54.6         | 384.4          | 14.7            | 399.0          | 24.3         | 423.3          | 3.7                            |
| Total                             | 333.6        | 62.4         | 396.0          | 17.7            | 413.6          | 33.1         | 446.7          | 4.3                            |
| Not attending in 1996             | 267.7        | 48.4         | 316.2          | 24.0            | 340.2          | 22.1         | 362.3          | 7.1                            |
| <b>Total</b>                      | <b>601.3</b> | <b>110.8</b> | <b>712.2</b>   | <b>41.7</b>     | <b>753.9</b>   | <b>55.2</b>  | <b>809.0</b>   | <b>5.5</b>                     |
| <b>TOTAL ATTENDED IN 1995</b>     |              |              |                |                 |                |              |                |                                |
| Attending in 1996                 |              |              |                |                 |                |              |                |                                |
| Full-time                         | 26.6         | 399.9        | 426.5          | 84.0            | 510.5          | 626.8        | 1 137.3        | 16.5                           |
| Part-time                         | 375.3        | 66.9         | 442.2          | 24.1            | 466.1          | 29.5         | 495.6          | 5.2                            |
| Total                             | 401.9        | 466.8        | 868.7          | 108.1           | 976.6          | 656.3        | 1 632.9        | 11.1                           |
| Not attending in 1996             | 411.0        | 119.1        | 530.2          | 90.7            | 621.0          | 49.1         | 670.1          | 14.6                           |
| <b>Total</b>                      | <b>812.9</b> | <b>585.9</b> | <b>1 398.9</b> | <b>198.8</b>    | <b>1 597.6</b> | <b>705.4</b> | <b>2 303.1</b> | <b>12.4</b>                    |

(a) To study for a recognised qualification.

Source: Transition from Education to Work, Australia (6227.0).

### 10.15 PERSONS AGED 15-64 ATTENDING AN EDUCATIONAL INSTITUTION, May 1996



Source: ABS, unpublished data, Transition from Education to Work Survey.

## Educational attainment

In May 1996, 5,090,800 persons aged 15–64 (42% of this population) had completed a recognised post-school qualification. A further 6,316,200 (52%) of this population had no recognised post-school qualification, and the remaining 635,200 persons (5%) were still at school (see table 10.16).

Of those with post-school qualifications, 1,700,600 held a skilled vocational qualification (such as a trade qualification), the most

commonly reported qualification. Bachelor degrees were reported by 1,092,700 persons, associate diplomas by 727,500, and 335,000 reported undergraduate diplomas. The smallest category comprised those with a higher degree, reported by 200,200 persons. There were more persons with a higher degree in the 35–44 years age group than in any other age group.

Graph 10.17 shows the distribution between males and females for each category of post-school qualifications in May 1996.

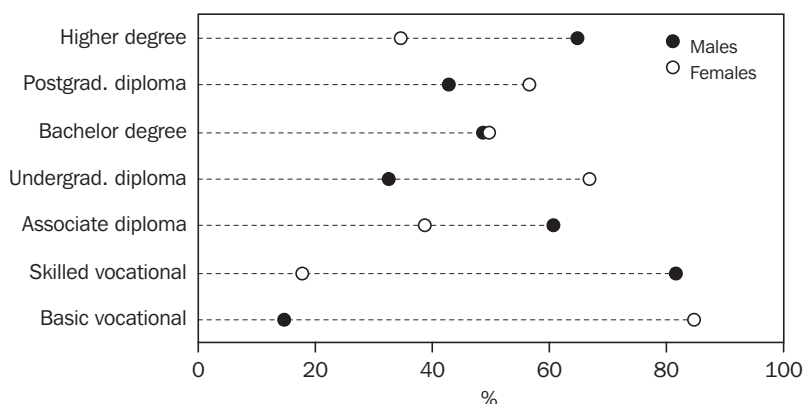
**10.16 PERSONS AGED 15–64, Educational Attainment — May 1996**

|                                          | Age group (years) |                |                |                |                | Total           |
|------------------------------------------|-------------------|----------------|----------------|----------------|----------------|-----------------|
|                                          | 15–24             | 25–34          | 35–44          | 45–54          | 55–64          |                 |
| Educational attainment                   | '000              | '000           | '000           | '000           | '000           | '000            |
| With post-school qualifications          |                   |                |                |                |                |                 |
| Higher degree                            | *1.9              | 39.8           | 70.9           | 63.0           | 24.5           | 200.2           |
| Postgraduate diploma                     | 10.7              | 64.9           | 96.9           | 54.5           | 25.3           | 252.3           |
| Bachelor degree                          | 141.5             | 342.3          | 336.1          | 198.4          | 74.3           | 1 092.7         |
| Undergraduate diploma                    | 23.3              | 77.8           | 107.8          | 79.2           | 46.9           | 335.0           |
| Associate diploma                        | 105.4             | 190.4          | 185.7          | 162.9          | 83.1           | 727.5           |
| Skilled vocational                       | 185.5             | 483.6          | 431.2          | 364.1          | 236.3          | 1 700.6         |
| Basic vocational                         | 152.3             | 216.0          | 212.0          | 134.3          | 67.9           | 782.4           |
| Total                                    | 620.6             | 1 414.8        | 1 440.6        | 1 056.4        | 558.3          | 5 090.8         |
| Without post-school qualifications       |                   |                |                |                |                |                 |
| Completed highest level of school        |                   |                |                |                |                |                 |
| Attending tertiary in May 1995           | 502.1             | 73.4           | 25.7           | 8.5            | *2.9           | 612.6           |
| Not attending tertiary in May 1995       | 348.7             | 403.9          | 321.6          | 254.6          | 182.2          | 1 511.0         |
| Total                                    | 850.8             | 477.3          | 347.3          | 263.1          | 185.1          | 2 123.6         |
| Did not complete highest level of school |                   |                |                |                |                |                 |
| Attending tertiary in May 1995           | 106.4             | 58.9           | 45.8           | 22.0           | *5.0           | 238.2           |
| Not attending tertiary in May 1995       | 458.8             | 868.5          | 921.4          | 945.2          | 752.2          | 3 946.1         |
| Total                                    | 565.2             | 927.4          | 967.2          | 967.2          | 757.2          | 4 184.3         |
| Total(a)                                 | 1 417.5           | 1 405.6        | 1 316.4        | 1 231.1        | 945.5          | 6 316.2         |
| Still at school                          | 632.5             | *1.2           | *0.6           | *0.8           | *0.1           | 635.2           |
| <b>Total</b>                             | <b>2 670.7</b>    | <b>2 821.6</b> | <b>2 757.6</b> | <b>2 288.3</b> | <b>1 504.0</b> | <b>12 042.1</b> |

(a) Includes persons who never attended school.

Source: *Transition from Education to Work, Australia* (6227.0).

10.17 DISTRIBUTION OF POST-SCHOOL QUALIFICATIONS, May 1996



Source: ABS, unpublished data, *Transition from Education to Work Survey*.

## Australians' literacy skills put to the test

### The Survey of Aspects of Literacy

For the first time, comprehensive statistical information is available about the literacy skills of adult Australians (aged 15–74). The Survey of Aspects of Literacy (SAL), conducted in 1996, was a national survey designed to measure some elements of Australians' literacy and numeracy skills.

The 'literacy and numeracy skills' covered in the survey were 'the information processing skills necessary to use printed material found at work, at home, and in the community'. The survey focused on 'functional literacy and numeracy' — those skills necessary to understand and use information from material which is printed in English and found in everyday life. The SAL objectively assessed three types of literacy:

**Prose literacy:** the ability to understand and use information from various kinds of prose texts, including texts from newspapers, magazines and brochures.

**Document literacy:** the ability to locate and use information contained in materials such as tables, schedules, charts, graphs and maps.

**Quantitative literacy:** the ability to perform arithmetic operations using numbers contained in printed texts or documents.

Consistent with international practice, these are also referred to as the prose, document and quantitative scales.

For each of these three scales, skill levels were assessed on a continuum ranging from Level 1 (very poor skills) through to Level 5 (very good skills). Because Level 5 is a comparatively small group, Level 4 and Level 5 are combined in most instances.

### How good are Australians' literacy skills?

The skill level distribution of people aged 15–74 was similar on each of the prose, document and quantitative literacy scales. About 2.6 million people had very poor skills (Level 1) and could be expected to experience considerable difficulties in using many of the printed materials that may be encountered in daily life. About 3.6 million were at Level 2, and could be expected to experience some difficulties in using many of the printed materials that may be encountered in daily life. Level 3 was the largest category, and the skills of the 4.8 million people at this level would enable them to cope with many printed materials found in daily life and at work, though not always with a high level of proficiency. Some 2.0 million people were at Level 4, representing good skills, and a relatively small number (300,000) were at Level 5, representing very good skills. People at both Level 4 and Level 5 are considered capable of managing the literacy demands of everyday life.

10.18 NUMBER AND PROPORTION AT EACH SKILL LEVEL

| Skill level | Prose scale |       | Document scale |       | Quantative scale |       |
|-------------|-------------|-------|----------------|-------|------------------|-------|
|             | '000        | %     | '000           | %     | '000             | %     |
| Level 1     | 2 607.4     | 19.7  | 2 580.3        | 19.5  | 2 531.8          | 19.2  |
| Level 2     | 3 631.9     | 27.5  | 3 738.3        | 28.3  | 3 590.8          | 27.2  |
| Level 3     | 4 668.9     | 35.3  | 4 774.2        | 36.1  | 4 764.0          | 36.0  |
| Level 4     | 2 052.7     | 15.5  | 1 880.8        | 14.2  | 2 011.9          | 15.2  |
| Level 5     | 259.9       | 2.0   | 247.2          | 1.9   | 322.3            | 2.4   |
| Total       | 13 220.8    | 100.0 | 13 220.8       | 100.0 | 13 220.8         | 100.0 |

Source: *Aspects of Literacy: Assessed Skill Levels, Australia, 1996 (4228.0)*.

The remainder of this article highlights some key aspects of the distribution of Australians' literacy skills.

### Age

Younger people tended to have higher levels of literacy than older people. Compared with older people, larger proportions of people aged under 45 had good skills (Level 4/5), with the exception of those aged 15–19. Many 15–19 year olds will not yet have completed their education and will have little work experience, and therefore their literacy skills may develop further.

The literacy skills of people aged 45 and over declined markedly with age. Some 41%–46% of those aged 65–74 had very poor skills, and three-quarters were at Levels 1 and 2. This may be related to greater proportions of older people having lower educational attainment levels, and/or the relatively high rate of disabilities (some of which would affect literacy skills) among older people.

### Sex

There were larger proportions of females at high levels of prose literacy for most age groups. However, in the 55–74 year age group, the proportion of males at Level 4/5 was greater than the proportion of females, possibly due to the (previous) better educational and labour force opportunities for males in this age group. On the quantitative scale, the proportions of males with Level 4/5 skills were larger than the corresponding proportions of females across all age groups. In total, 22% of males were at Level 4/5, compared with 14% of females. On the document scale, the proportions of males and females with good skills (Level 4/5) were similar for those aged under 45, but older males tended to have better document skills than older females.

### Language

Of people who did not speak English as their first language, between 43% (on the quantitative scale) and 48% (on the prose scale) were at Level 1, representing approximately one million people. In comparison, of people whose first language was English, 14% (on each scale) were at Level 1, about 1.5 million people. Some 18%–20% of those whose first language was English were at Level 4/5, compared with 7%–8% for those whose first language was not English.

### Indigenous peoples living in urban areas

Significantly greater proportions of Indigenous peoples living in urban areas were at low literacy levels compared with other people who spoke English as their first language, and their skills showed more variation across the three scales. Some 41% were at Level 1 on the prose scale, 45% were at Level 1 on the document scale, and 47% were at Level 1 on the quantitative scale. Different levels of educational attainment may explain these results to some extent. Some 62% of Indigenous peoples did not complete the highest level of secondary school (the corresponding proportion for other people whose first language was English was 36%).

### Educational attainment

In general, greater proportions of people with high skill levels had high levels of educational attainment compared with those at lower skill levels. For example, 65% of people at Level 4/5 on the prose scale had a post-school qualification, compared with 22% of people at Level 1.

### Labour force status

There was a clear relationship between literacy skill level and labour force status.



Depending on the literacy scale, 11%–12% of employed people were at Level 1. The corresponding percentages for unemployed people were 30%–31%, and for those who were not in the labour force the proportions were even larger. The proportions at Level 2 within each labour force category were similar, but significantly larger proportions of employed people were at Levels 3 and 4/5, compared with unemployed people and those not in the labour force.

### Income

Just 6% of people at Level 1 on the prose scale received an annual income in the highest quintile, compared with 30% of people at Level 4/5. Some 63% of people at Level 1 on the prose scale were in the two lowest income quintiles. The income distributions for Levels 2 and 3 were similar to the distribution for the total population. The results on the document and quantitative scales were similar, but the proportion of people at Level 4/5 on the quantitative scale who were in the top income quintile was the highest of all scales, at 37%. This may be because greater proportions of males were at Level 4/5 on the quantitative scale compared with females, and males tend to have larger incomes.

### Literacy-related activities

On each of the three scales, larger proportions of people at the higher skill levels undertook literacy-related activities at least once a week compared with those at lower skill levels. The proportions of people at Level 1 who had more than 25 books, a dictionary, or a daily newspaper in the home were markedly smaller than the corresponding proportions of people at higher skill levels. Having more than 25 books in the home appeared to be more closely related to

performance on the prose scale than did having a dictionary or a daily newspaper. On the prose scale, 70% of people at Level 1 had more than 25 books in the home, compared with 85% at Level 2, 94% at Level 3 and 98% at Level 4/5.

### Literacy in the workplace

A larger proportion of workers at Level 4/5 performed four or more reading activities at least weekly than did those at Level 1 (62%–65% compared with 22%–25%, depending on the scale). Similarly, depending on the scale, 52%–55% of those at Level 4/5 performed two or more writing activities at least weekly, compared with 16%–19% of workers at Level 1. The proportion of workers at each level on the prose scale who read or used letters or memos daily increased with higher skill levels. Of workers at Level 1, 31% read or used letters or memos daily, compared with 43% at Level 2, 53% at Level 3 and 63% at Level 4/5. Similarly, the proportion of workers who wrote letters or memos daily increased with skill level. However, at each skill level, smaller proportions wrote letters or memos daily compared with the proportion that read or used letters or memos daily.

### People who needed help

Compared to all other levels, much larger proportions of people at Level 1 (on each scale) reported needing help often with various literacy-related activities. On all scales, approximately 7% of people at Level 1 reported needing help often with basic arithmetic, ranging up to 19% who reported needing help often to read information (in English) from government agencies, businesses or other institutions.

## Adult education

Adult and community education (ACE) is the most decentralised of the education sectors. ACE refers to the provision of those general adult education programs and activities which fall outside, but complement, the formal programs and qualification pathways provided by the school, TAFE and higher education sectors. ACE focuses on the provision of learning opportunities at a community level, rather than work-based training.

The range of course providers is widespread and includes: commercial training providers, private industry, church and cultural groups, professional and semi-professional bodies, the YMCA and similar institutions, higher education institutions (including tertiary bodies), TAFE institutions, primary and secondary schools, workers' educational associations, personal tuition, State and Commonwealth departments, public libraries, museums, and galleries.

Courses range from general interest, recreational and leisure activities, personal development,

social awareness and craft through to vocational, remedial and basic education. Community-based adult education is open to all, and its non-formal characteristics demonstrate the capacity of the community to develop alternatives to institutionalised education.

The higher education sector plays an integral part in adult education through programs of continuing education in professional development, preparatory skills and general education. One such program is the University of the Third Age (U3A), which provides enrichment courses for people over the age of 50. Some of these courses are offered by institutions in response to industry and government initiatives and are at a level consistent with the general teaching of the institutions.

The TAFE and community education sectors are the largest providers of adult recreational and leisure courses. In 1996, just over 390,000 clients undertook personal enrichment programs only. This was a slight fall from 1995.

Government assistance to students

In 1996, the Commonwealth Government provided assistance to students through the AUSTUDY, ABSTUDY and Assistance for Isolated Children (AIC) schemes shown in table 10.19. Neither the number of students nor the amount of assistance provided may be totalled, as some of those receiving the AUSTUDY/ABSTUDY supplement (those who did not fully trade in their grant) would be counted twice. More information on each of these schemes is provided below.

| 10.19 STUDENT ASSISTANCE SCHEMES, 1996 |          |            |
|----------------------------------------|----------|------------|
|                                        | Students | Assistance |
| Scheme                                 | no.      | \$m        |
| AUSTUDY                                | 489 541  | 1 533      |
| ABSTUDY                                | 48 769   | 122        |
| AIC                                    | 11 896   | 23         |
| AUSTUDY/ABSTUDY Supplement             | 64 586   | 52         |

Source: Department of Employment, Education, Training and Youth Affairs.

AUSTUDY

AUSTUDY is the Commonwealth Government's means-tested and non-competitive scheme of financial assistance for secondary and tertiary students aged 16 and over. The scheme is a major element in the Government's drive to

increase participation in full-time education in the upper secondary and tertiary levels.

The principal aim of AUSTUDY is to provide an equal opportunity for all Australians to access education. This is achieved through the provision of financial assistance to students who would not otherwise be able to continue their education because of financial circumstances.

AUSTUDY also has special provisions for young people unable to live with their parents because of exceptional circumstances. These provisions allow young people to be classified as independent, thus free from the application of the parental means test in assessing their eligibility for AUSTUDY.

The number of students assisted under AUSTUDY has increased substantially since the introduction of the scheme in 1987, from about 225,000 students in that first year to 489,541 in 1996.

ABSTUDY

ABSTUDY represents a major component of the Government's commitment, under the National Aboriginal and Torres Strait Islander Education Policy, to encourage Australian Aboriginal and Torres Strait Islander peoples to take full advantage of educational opportunities, to promote equality of education, to be involved in decision-making and to improve educational outcomes.

The scheme provides financial assistance for Australian Aboriginal and Torres Strait Islander peoples who undertake approved secondary or tertiary education courses. Assistance is also available to primary students aged 14 or over.

ABSTUDY pays an education supplement to certain Indigenous school students. Other allowances include the living allowance, dependent spouse allowance, school fees allowance, a fares allowance in some circumstances, the pensioner education supplement and an incidental allowance. Full-time, correspondence and tertiary part-time students may be eligible for assistance. Some ABSTUDY allowances are not income tested. Others are subject to income testing and abatement rules. In 1996, ABSTUDY assisted 48,769 students.

AUSTUDY/ABSTUDY supplement

The AUSTUDY/ABSTUDY supplement gives eligible tertiary students the chance to trade in all or part of their grant in return for a

supplement loan of double the amount traded in. The supplement is entirely optional and is provided at low interest. Repayments do not commence until five years after start of the loan, after which recovery is made through the taxation system when taxable income reaches average weekly earnings.

An AUSTUDY/ABSTUDY grant is also available to dependent tertiary students in some circumstances. In 1996, 64,586 tertiary students were paid an AUSTUDY/ABSTUDY supplement loan, an increase from the 45,138 students who received assistance in 1993, the scheme's first year of operation.

### Assistance for isolated children

The Assistance for Isolated Children (AIC) Scheme helps the families of primary and secondary students, and tertiary students under 16 years old, who do not have reasonable daily access to an appropriate government school primarily because of geographic isolation. An 'appropriate school' is a government school which offers the student's level of study or, if the student has special health-related or educational needs, one which provides access to the facilities, programs and/or environment required for those needs.

With the exception of the additional component of Boarding Allowance, all AIC allowances are free of income and assets testing. Depending on parental income and family assets, students 16 years old and over may receive more assistance under AUSTUDY. In 1996, AIC assisted 11,896 students and scheme expenditure was \$23 million.

### Expenditure on education

This section provides information on the extent and composition of both government and private expenditure on education. Estimates of government and private expenditure have been compiled in accordance with national accounting concepts. An explanation of these concepts is contained in *Australian National Accounts: Concepts, Sources and Methods* (5216.0); *Government Finance Statistics — Concepts, Sources and Methods* (5514.0); *Information Paper: Developments in Government Finance Statistics* (5516.0); and also in *Expenditure on Education, Australia* (5510.0) from which figures included in this section have been taken.

The emphasis given to the outlays of the public sector reflects not only the relative importance of that sector in the provision of educational services, but also the lack of detailed information relating to expenditure on educational activities in the private sector. However, the information provided shows the order of magnitude of private sector spending, and also the aggregate supply of education services and facilities.

Table 10.20 presents the total outlays on education by the government and private sectors and their components, and the percentages of Gross Domestic Product (GDP) which they represent, for 1995–96 and preceding years.

Total outlays on education rose 4.4% from \$25,559 million to \$26,683 million between 1994–95 and 1995–96, but their percentage of GDP fell from 5.6% to 5.5%.

Total final expenditure on education, comprising government and private final consumption expenditure and gross fixed capital expenditure, rose 4.0% from \$23,225 million in 1994–95 to \$24,154 million in 1995–96. Between those years, government final expenditure rose 3.3%, compared with growth of private final expenditure of 5.9%.

Government final expenditure on education as a proportion of GDP has fallen each year since 1992–93, from 4.0% in 1992–93 to 3.7% in 1995–96 (graph 10.21). Private final expenditure on education as a proportion of GDP remained at 1.4% for the years 1992–93 to 1994–95, then fell to 1.3% in 1995–96.

Total government outlays on education (which include payments to the private sector) rose 4.9% from \$22,665 million to \$23,778 million between 1994–95 and 1995–96, but fell as a proportion of GDP from 5.0% to 4.9%. This growth in outlays was due to a 4.9% increase in Commonwealth outlays plus a 4.2% rise in State, Territory and local outlays. Commonwealth grants to the States and Territories rose 2.9% during 1995–96. Outlays by State and local governments from their own resources rose 4.9% during 1995–96, compared to a 1.8% increase during 1994–95.

Table 10.22 shows the components of government outlays on education by economic transaction and government purpose in 1995–96.

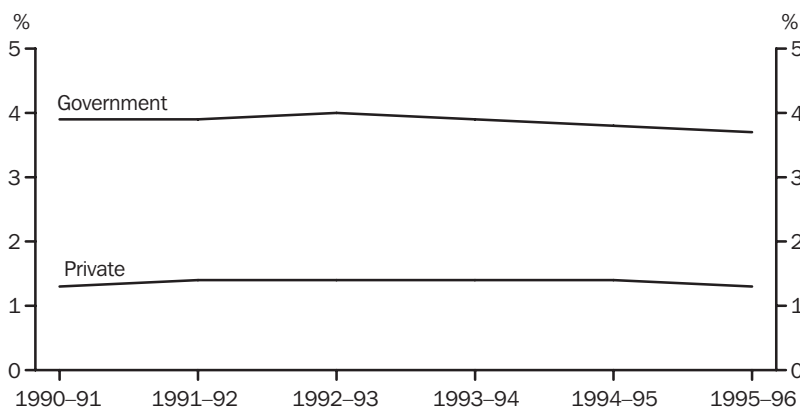
## 10.20 GOVERNMENT AND PRIVATE OUTLAYS ON EDUCATION

|                                                            | 1990-91       | 1991-92       | 1992-93       | 1993-94       | 1994-95       | 1995-96       |
|------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| VALUE (\$m)                                                |               |               |               |               |               |               |
| <b>Government outlays</b>                                  |               |               |               |               |               |               |
| Government final consumption expenditure                   | 13 182        | 14 154        | 14 722        | 15 413        | 15 830        | 16 409        |
| Gross fixed capital expenditure                            | 1 361         | 1 239         | 1 440         | 1 192         | 1 261         | 1 247         |
| Grants and advances to persons and non-profit institutions | 2 154         | 2 365         | 2 469         | 2 672         | 2 860         | 3 054         |
| Grants to persons                                          | 1 763         | 2 049         | 2 219         | 2 262         | 2 270         | 2 498         |
| Advances to persons for HECS purposes                      | 471           | 564           | 575           | 575           | 380           | 540           |
| Other                                                      | 27            | 108           | 97            | 16            | 65            | 29            |
| <i>Total government outlays on education</i>               | <i>18 959</i> | <i>20 479</i> | <i>21 522</i> | <i>22 130</i> | <i>22 665</i> | <i>23 778</i> |
| <b>Private outlays</b>                                     |               |               |               |               |               |               |
| Private final consumption expenditure                      | 4 436         | 5 035         | 5 307         | 5 548         | 5 754         | 6 041         |
| Gross fixed capital expenditure                            | 388           | 340           | 352           | 401           | 380           | 457           |
| <i>Total private outlays on education</i>                  | <i>4 824</i>  | <i>5 375</i>  | <i>5 659</i>  | <i>5 949</i>  | <i>6 134</i>  | <i>6 498</i>  |
| <b>Total outlays on education</b>                          |               |               |               |               |               |               |
| Total government outlays                                   | 18 959        | 20 479        | 21 522        | 22 130        | 22 665        | 23 778        |
| Total private outlays                                      | 4 824         | 5 375         | 5 659         | 5 949         | 6 134         | 6 498         |
| Less private outlays financed by government                | 2 625         | 2 929         | 3 044         | 3 247         | 3 240         | 3 594         |
| <b>Total outlays on education</b>                          | <b>21 158</b> | <b>22 925</b> | <b>24 137</b> | <b>24 833</b> | <b>25 559</b> | <b>26 683</b> |
| Gross Domestic Product(a)                                  | 376 318       | 391 323       | 409 589       | 431 072       | 454 063       | 487 128       |
| PROPORTION OF GROSS DOMESTIC PRODUCT (%)                   |               |               |               |               |               |               |
| Total government outlays                                   | 5.0           | 5.2           | 5.3           | 5.1           | 5.0           | 4.9           |
| Total final expenditure on education, of which             |               |               |               |               |               |               |
| Government final consumption expenditure                   | 3.5           | 3.6           | 3.6           | 3.6           | 3.5           | 3.4           |
| Private final consumption expenditure                      | 1.2           | 1.3           | 1.3           | 1.3           | 1.3           | 1.2           |
| Government gross fixed capital expenditure                 | 0.4           | 0.3           | 0.4           | 0.3           | 0.3           | 0.3           |
| Private gross fixed capital expenditure                    | 0.1           | 0.1           | 0.1           | 0.1           | 0.1           | 0.1           |
| <i>Total</i>                                               | <i>5.1</i>    | <i>5.3</i>    | <i>5.3</i>    | <i>5.2</i>    | <i>5.1</i>    | <i>5.0</i>    |
| <b>Total outlays on education</b>                          | <b>5.6</b>    | <b>5.9</b>    | <b>5.9</b>    | <b>5.8</b>    | <b>5.6</b>    | <b>5.5</b>    |

(a) The figures for Gross Domestic Product (GDP(E)) are obtained from Australian National Accounts: National Income, Expenditure and Product, March Quarter 1997 (5206.0).

Source: *Expenditure on Education, Australia (5510.0)*.

## 10.21 FINAL EXPENDITURE ON EDUCATION, As a % of GDP



Source: *Expenditure on Education, Australia (5510.0)*.

## 10.22 GOVERNMENT OUTLAYS ON EDUCATION, 1995-96

|                                              | General government final consumption expenditure | Personal benefit payments | Expenditure on new fixed assets | Expenditure on secondhand fixed assets | Other(a)(b)  | Inter-governmental grants(c) | Own source outlays(b)(d) |
|----------------------------------------------|--------------------------------------------------|---------------------------|---------------------------------|----------------------------------------|--------------|------------------------------|--------------------------|
|                                              | \$m                                              | \$m                       | \$m                             | \$m (net)                              | \$m          | \$m                          | \$m                      |
| <b>Primary and secondary education</b>       |                                                  |                           |                                 |                                        |              |                              |                          |
| Commonwealth(e)                              | 42                                               | 646                       | —                               | —                                      | 17           | 3 209                        | 3 913                    |
| State, Territory and local(e)                | 8 994                                            | 72                        | 658                             | -35                                    | 2 783        | -3 209                       | 9 263                    |
| Total                                        | 9 036                                            | 718                       | 658                             | -35                                    | 2 787        | —                            | 13 163                   |
| <b>Tertiary education</b>                    |                                                  |                           |                                 |                                        |              |                              |                          |
| University education                         |                                                  |                           |                                 |                                        |              |                              |                          |
| Commonwealth                                 | 291                                              | 907                       | 34                              | -2                                     | 554          | 3 588                        | 5 372                    |
| State, Territory and local                   | 3 694                                            | 4                         | 242                             | -11                                    | 16           | -3 588                       | 357                      |
| Total                                        | 3 985                                            | 911                       | 277                             | -13                                    | 569          | —                            | 5 728                    |
| Technical and further education              |                                                  |                           |                                 |                                        |              |                              |                          |
| Commonwealth                                 | —                                                | 248                       | —                               | —                                      | 1            | 788                          | 1 036                    |
| State, Territory and local                   | 1 999                                            | 2                         | 325                             | 1                                      | 65           | -788                         | 1 604                    |
| Total                                        | 1 999                                            | 250                       | 325                             | 1                                      | 64           | —                            | 2 638                    |
| Tertiary education n.e.c.                    |                                                  |                           |                                 |                                        |              |                              |                          |
| Commonwealth                                 | —                                                | 63                        | —                               | —                                      | —            | —                            | 63                       |
| State, Territory and local                   | 20                                               | —                         | 2                               | —                                      | —            | —                            | 23                       |
| Total                                        | 20                                               | 63                        | 2                               | —                                      | —            | —                            | 86                       |
| Total tertiary education                     |                                                  |                           |                                 |                                        |              |                              |                          |
| Commonwealth                                 | 291                                              | 1 218                     | 34                              | -2                                     | 554          | 4 376                        | 6 471                    |
| State, Territory and local                   | 5 714                                            | 6                         | 569                             | -10                                    | 82           | -4 376                       | 1 984                    |
| Total                                        | 6 004                                            | 1 224                     | 604                             | -12                                    | 633          | —                            | 8 452                    |
| <b>Preschool and other special education</b> |                                                  |                           |                                 |                                        |              |                              |                          |
| Commonwealth                                 | 75                                               | 8                         | —                               | —                                      | —            | 59                           | 142                      |
| State, Territory and local                   | 960                                              | 3                         | 13                              | —                                      | 157          | -59                          | 1 074                    |
| Total                                        | 1 035                                            | 10                        | 13                              | —                                      | 157          | —                            | 1 216                    |
| <b>Transportation of students</b>            |                                                  |                           |                                 |                                        |              |                              |                          |
| Commonwealth                                 | —                                                | —                         | —                               | —                                      | —            | —                            | —                        |
| State, Territory and local                   | 200                                              | 536                       | 1                               | —                                      | 6            | —                            | 743                      |
| Total                                        | 200                                              | 536                       | 1                               | —                                      | 6            | —                            | 743                      |
| <b>Education n.e.c.</b>                      |                                                  |                           |                                 |                                        |              |                              |                          |
| Commonwealth                                 | 116                                              | 2                         | —                               | —                                      | 35           | —                            | 153                      |
| State, Territory and local                   | 18                                               | 9                         | 26                              | -6                                     | 5            | —                            | 52                       |
| Total                                        | 133                                              | 11                        | 26                              | -6                                     | 40           | —                            | 204                      |
| <b>Total government outlays</b>              |                                                  |                           |                                 |                                        |              |                              |                          |
| Commonwealth                                 | 523                                              | 1 873                     | 35                              | -2                                     | 606          | 7 645                        | 10 680                   |
| State, Territory and local                   | 15 886                                           | 625                       | 1 266                           | -51                                    | 3 033        | -7 644                       | 13 116                   |
| <b>Total</b>                                 | <b>16 409</b>                                    | <b>2 498</b>              | <b>1 301</b>                    | <b>-53</b>                             | <b>3 623</b> | <b>—</b>                     | <b>23 778</b>            |

(a) Mainly current grants to non-government schools, subsidies for teacher housing and advances to persons under the HECS scheme. (b) Totals for other and own source outlays do not agree with the sum of Commonwealth and State and Territory and local other and own source outlays because of consolidation of transfers between these levels of government. (c) Specific purpose grants from the Commonwealth Government to State and Territory Governments. The amounts concerned are shown as a deduction from outlays in the rows for State, Territory and local governments. (d) Outlays on education less specific purpose grants received from other levels of government. In the case of the Commonwealth Government, this represents its total outlays, but in the case of State, Territory and local governments it represents outlays financed from their own resources and non-specific Commonwealth grants. (e) Commonwealth funding of non-government schools is made via inter-governmental grants which are passed on through State and Territory Governments.

Source: *Expenditure on Education, Australia (5510.0)*.

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## Introduction

This chapter provides an overview of the Australian criminal justice system. Where possible, data are based on national crime and justice statistics from surveys and administrative by-product collections, focusing on crime victimisation, crimes recorded by police, community attitudes to police and related issues, criminal courts and correctional services. The objective of national crime and justice statistics is to make available data which are comparable across Australia, and so provide indicators of the level and nature of crime and the activities of criminal justice agencies in Australia.

## The criminal justice system

The criminal justice system consists of the State and Commonwealth institutions, agencies, departments and personnel responsible for dealing with the justice aspects of crime, victims of crime, persons accused or convicted of committing a crime, and related issues and processes.

In all States and Territories, two systems of criminal justice exist: the federal criminal justice system, based on offences against Commonwealth laws, and the relevant State system, based on offences against State laws. Criminal law is administered principally through the Commonwealth, State and Territorial police forces, the National Crime Authority, and State and Territorial corrective or penal services. There is no independent federal corrective service, and the relevant State or Territorial agencies provide corrective services for federal offenders.

The States and Territories have independent legislative powers in relation to all matters that are not otherwise specifically vested in the Commonwealth of Australia, and it is the statute law and the common law of the States and Territories that primarily govern the day-to-day lives of most Australians.

The States and Territories have powers to enact their own criminal law, while the Commonwealth has powers to enact laws, including sanctions for criminal offences, in relation to its responsibilities under the

Constitution. Thus, in effect, there are nine different systems of criminal law in existence in Australia.

The various agencies that comprise the criminal justice system can be seen as acting within a broader process in which criminal incidents and offenders move through a number of stages. Figure 11.1 indicates these broad stages and the points at which the different justice agencies make their contribution.

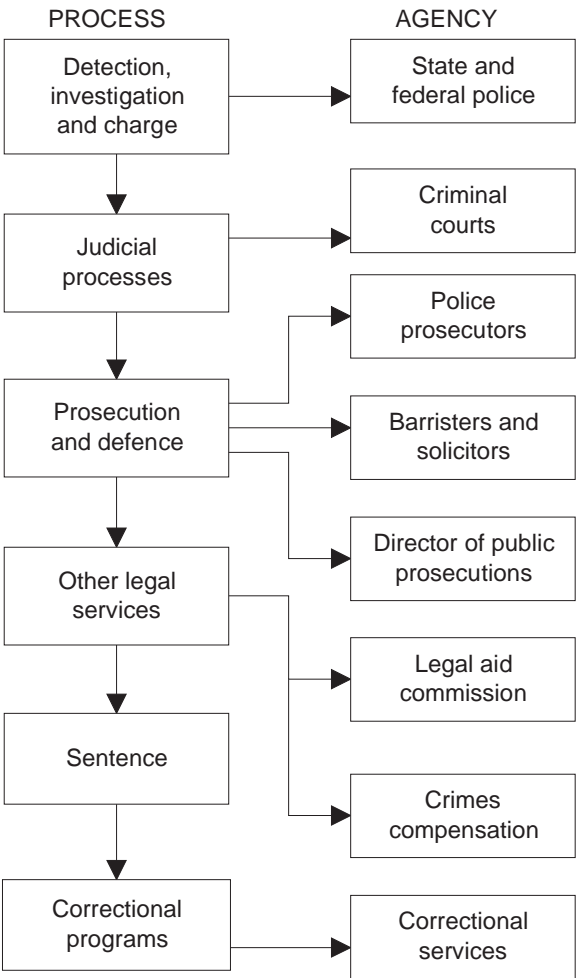
Police agencies are responsible for the prevention, detection and investigation of crimes. Where an alleged offender is detected by police, charges may then be laid before a criminal court. The court, consisting of a judicial officer, a jury (in the higher courts), the prosecution and the defence, is then responsible for determining the guilt or innocence of the defendant.

In addition to the court itself, there are a number of other agencies involved in the court process. These include legal representatives for the prosecution and defence. Police Prosecutors are generally responsible for less serious matters heard before courts of summary jurisdiction, while Crown Prosecutors normally handle prosecution of the more serious matters dealt with at the Supreme or Intermediate court levels. For defendants, legal aid may be available to handle their defence.

Following the hearing of the charges, in cases where a finding of guilt is made by the court a sentence may be imposed. Fines and bonds are the most common penalties handed down by the courts. The more serious sentences are administered by correctional services agencies. These may include imprisonment, community work of various kinds and some types of bonds. A number of jurisdictions have also introduced new penalties such as home detention or work camps which are also administered by correctional agencies.

For victims of crime, compensation may be available through the courts, and this is normally handled through a special tribunal. The State provides compensation to victims who can demonstrate an injury or suffering as a result of a criminal incident. The State will then seek these funds from the offender, if they have been identified and convicted.

11.1 THE CRIMINAL JUSTICE SYSTEM



**Expenditure on public order and safety**

The government sector of public order and safety covers outlays on administration, supervision, support, operation and review of public order and safety affairs and services. Public order and safety includes police and fire protection services, law courts and legal services, prisons and corrective services, and other services related to public order and safety.

In 1995–96, \$6.75b (equivalent to \$366 per person) was spent by the Commonwealth Government and the State, Territory and local governments on public order and safety

(see table 11.2). Compared to 1994–95, this represents an increase of 8.4% in total outlays, or \$24 more per person.

**11.2 GOVERNMENT CURRENT AND CAPITAL EXPENDITURE**

|                      | 1993–94       | 1994–95       | 1995–96      |
|----------------------|---------------|---------------|--------------|
| Expenditure category | \$m           | \$m           | \$m          |
| Current outlays      | r5 384        | r5 722        | 6 178        |
| Capital outlays      | r414          | r502          | 567          |
| <b>Total outlays</b> | <b>r5 798</b> | <b>r6 224</b> | <b>6 745</b> |

Source: Government Finance Statistics, Australia, 1995–96 (5512.0).

## The police

Australia is served by eight police forces: one in each State and the Northern Territory, and the Australian Federal Police who are also responsible for policing the Australian Capital Territory. The National Crime Authority also has a policing role.

The principal duties of the police are the prevention and detection of crime, the protection of life and property, and the enforcement of law to maintain peace and good order. They may perform a variety of additional duties in the service of the State, including the prosecution of summary offences, regulation of street traffic, and acting as clerks of petty sessions, Crown land bailiffs, mining wardens and inspectors under the Fisheries and other relevant Acts.

With the exception of the Australian Federal Police and the National Crime Authority, police forces in Australia are under the control of the State and Northern Territory Governments, but their members perform certain functions on behalf of the Commonwealth Government, such as the registration of aliens, and in conjunction with the Australian Federal Police and other Commonwealth officers they enforce various Commonwealth Acts and Regulations.

## Commonwealth policing agencies

### Australian Federal Police (AFP)

The AFP is a Commonwealth statutory authority brought into existence by the *Australian Federal Police Act 1979*. The AFP has its headquarters in Canberra. Its Criminal Investigations Program is conducted through six Regional Commands, its Headquarters Investigations Department and its numerous Liaison Officers in many overseas countries.

The AFP is responsible for the prevention, detection and investigation of criminal offences such as drug offences, money laundering and organised crime, identifying the proceeds of crime, and investigation of fraud against Commonwealth revenue and expenditure such as social security fraud and taxation fraud. In the Australian Capital Territory, the AFP provides a full range of general community policing services, including traffic control, special operations, search and rescue services and conventional crime investigations.

### National Crime Authority (NCA)

The NCA was established by the Commonwealth Government in July 1984 through the *National Crime Authority Act 1984*. Similar legislation was passed in each State, the Northern Territory and subsequently the Australian Capital Territory, to underpin the work of the NCA in those jurisdictions, making the NCA the only law enforcement agency in Australia whose investigations are not limited by jurisdictional or territorial boundaries.

The decision to establish the NCA was taken in response to the findings of several Royal Commissions conducted in the late 1970s and early 1980s, which revealed the extent of organised criminal activity in Australia. The NCA's mission is to counteract organised criminal activity and reduce its impact on the Australian community, working in cooperation and partnership with other agencies.

## Size of police forces

The number of sworn police officers in the various Australian police forces is shown in table 11.3. The figures have been supplied by the various police agencies, and are not directly comparable (for example, the figures do not differentiate between full-time and part-time officers). In some police forces, unsworn (civilian) staff carry out duties directly connected with policing.

Further detail on the operations of each force may be found in the police forces' annual reports to their Ministers.

**11.3 SIZE OF POLICE FORCES**

|                 | at 1 July 1996   | at 1 July 1997   |
|-----------------|------------------|------------------|
| Police force    | no.              | no.              |
| NCA             | 118              | 105              |
| AFP             | 2 117            | 2 027            |
| — ACT component | 614              | n.y.a.           |
| NSW             | 13 107           | 13 207           |
| Vic.            | 10 088           | 10 130           |
| Qld             | 6 422            | 6 561            |
| SA              | 3 470            | 3 447            |
| WA              | 4 561            | 4 784            |
| Tas.            | 1 052            | 1 052            |
| NT              | 775              | 779              |
| <b>Total</b>    | <b>(a)41 710</b> | <b>(a)42 092</b> |

(a) Includes the NCA and AFP. ACT component of AFP is included in AFP total.

Source: Police annual reports, data collated by the National Police Research Unit and the Report on Government Service Provision, Steering Committee for the Review of Commonwealth/State Service Provision, 1997.

## National Survey: Community Satisfaction With Police Services

The National Surveys of Community Satisfaction with Police Services were included in the Population Survey Monitor (PSM) during 1996. The PSM is a household survey conducted by the ABS every quarter which collects information from about 3,000 households Australia wide. One person aged 18 years or over was asked to respond to the survey from each of the selected households.

The National Survey of Community Satisfaction with Police Services provides information on attitudes towards services provided by the police, perceptions on fear of crime and problems in the neighbourhood area. It also provides information on the most recent contact with the police, who initiated the contact and reasons for contact.

### Services provided by the police

More than two-thirds of Australians aged 18 years and over were generally satisfied/very satisfied with services provided by police (70%) and, in particular, with the job that police were doing in supporting community programs (72%). However, only about half of the population (53%) had similar satisfaction levels towards police in dealing with public order problems.

About one in five of Australians had an immediate family member or close friend who worked for the police. However, their perceptions toward services provided by police were similar to those of the rest of the community.

### Fear of crime and personal safety

The majority of Australians felt safe/very safe staying at home alone. The level of fear was greater after dark (80% felt safe/very safe) than during the day (93% felt safe/very safe), especially for females and older people.

The level of personal safety during such activities as walking or jogging locally and travelling on public transport was found to be significantly different during the day compared with after

dark. 89% of people felt safe/very safe walking or jogging during the day, and 75% felt safe/very safe using public transport. In contrast, only one-quarter of the population felt safe/very safe to travel after dark and 40% felt safe/very safe walking or jogging locally after dark.

In general, the proportions of males and females who felt safe to be at home, walking or jogging locally and travelling on public transport were similar during the day. However, significantly higher proportions of females felt unsafe after dark than males.

Over half (54%) of persons aged 65 years and over felt unsafe/very unsafe walking or jogging after dark, compared to 40% for the other age groups. Perceptions on unsafe/very unsafe travelling on public transport after dark were very similar across all age groups.

### Safe driving

The majority of Australians aged 18 years and over (86%) had driven a motor vehicle in the previous 12 months. Of these people, 13% believed that they had always/most of the time driven 10 kilometres per hour or more over the speed limit and 10% believed that they had sometimes been over the 0.05% blood alcohol limit when they drove a car. Australians felt that wearing a seat belt was one of the most important safety protections, with 93% of people indicating that they always wore a seat belt when travelling by car.

### Contact with police

In the previous 12 months, almost half of Australians aged 18 years and over had had contact with police such as in a police station, at a random breath testing station, over the telephone or at a community meeting. With these people, 57% of the most recent contacts were initiated by police. The two most common situations were random breath tests (64%) and traffic violations (12%). For those people who initiated contact with police, the most common reasons were reporting a crime (34%) and getting assistance (19%).

## National crime statistics

The aim of national crime statistics is to provide comparable data across the States and Territories. These statistics are indicators of the level and nature of reported crime in Australia and provide a basis for measuring changes over time.

Two sources of national statistics provide a picture of crime in Australia: crimes recorded by police, and crime victimisation surveys. Crimes recorded by police relate to offences that have become known to and have been reported by police. These offences may have been reported by a victim, witness or other person, or they may have been detected by police. These statistics do not provide a total picture of crime, as not all crimes come to the attention of the police. In addition, care should be taken in interpreting police statistics, as fluctuations in recorded crime may be a reflection of changes in community attitudes to recording crime, changes in police procedures or changes in crime recording systems, rather than a change in the incidence of criminal behaviour.

To gain a more comprehensive picture of the nature and extent of crime, police statistics are complemented by information from other sources such as crime victimisation surveys. These surveys are conducted on a household basis. Not all types of crime are suitable for measurement by household surveys. No reliable information can be obtained about crimes without specific victims, such as trafficking in narcotics. Crimes of which the victim may not be aware cannot be measured effectively; some instances of fraud and attempted crimes of many types may fall into this category. It may also be difficult to obtain information about some crimes, such as sexual offences and assault by other household members, so that some of these crimes are not fully reflected in the data collected. Finally, no reliable data can be collected by household surveys on crimes against commercial establishments.

In essence, crime victimisation surveys are more suitable for measuring crimes against individuals or households with specific victims who are aware of and recall what happened to them and how it happened, and who are willing to relate what they know.

## Crime victimisation surveys

A national household survey on crime and safety was conducted in 1993. Similar surveys were

conducted in 1995 in all States and Territories except Tasmania and the Northern Territory, and have been conducted annually in New South Wales since 1990. The ABS also conducted a Women's Safety Survey (WSS) in 1996. A national crime and safety survey will be conducted in April 1998. The following sections examine specific features from the 1993 National Crime and Safety Survey and the main findings from the WSS. An article on the results from the WSS is included at the end of this chapter.

### Victims of assault

In 1993, there were an estimated 334,200 people aged 15 years and over who reported being a victim of assault in the previous 12 month period. Although a majority of these assault victims (57%) had experienced only one assault, a large proportion of assault victims had been assaulted on more than one occasion: 18% twice, a further 16% three or four times, and another 9% five or more times over the previous 12 months (see table 11.4).

About the same proportions of men and women reported being the victim of only one assault. However, while about the twice as many men as women reported being the victim of more than one assault, women were more likely to have been assaulted on three or more occasions. Similarly, separated and divorced victims were more likely than other marital status categories to be the victims of three or more assaults.

**11.4 ASSAULT, Repeat Victimisation — 1993**

|                       | Number of incidents in the previous 12 months |             |               | Total number of victims |
|-----------------------|-----------------------------------------------|-------------|---------------|-------------------------|
|                       | One                                           | Two         | Three or more |                         |
|                       | %                                             | %           | %             | '000                    |
| Men                   | 56.4                                          | 20.6        | 23.0          | 213.8                   |
| Women                 | 57.5                                          | 12.9        | 29.6          | 120.4                   |
| Marital status        |                                               |             |               |                         |
| Married/de facto      | 58.9                                          | 16.8        | 24.3          | 112.3                   |
| Separated/divorced    | 46.3                                          | 17.0        | 36.7          | 36.9                    |
| Never married         | 57.9                                          | 18.4        | 23.7          | 182.9                   |
| <b>All victims(a)</b> | <b>56.8</b>                                   | <b>17.8</b> | <b>25.4</b>   | <b>334.2</b>            |

(a) Includes widowed people.

Source: ABS, unpublished data, Crime and Safety Survey, 1993.

Details of assault

Women (68%) were more likely than men (47%) to know their attacker or some of their attackers. This was particularly the case for repeat victims, where 90% of women who had been a victim of assault three or more times in the previous 12 months knew the offender(s) in the last incident, compared with 47% of men in the same situation. Those assault victims in partnership, and those who had been separated or divorced, were more likely to have known the perpetrator of the assault than were those who had never been married. Separated or divorced women were the most likely to have known their attacker.

Assaults can occur in a variety of settings, but the most common locations were within or around the home (25% of all victims) or on the street (20%).

The pattern was quite different for men and women. Women were much more likely to be assaulted in or around the home (42% compared with 15% of male victims). Some 58% of incidents of assault of women who had been assaulted on three or more occasions in the previous 12 months, and knew their attacker(s) in the last incident, happened at home. For male victims of known offender(s), the three most common locations for the last incident were at home, at the place of work/study and on the street/on open land.

Women’s Safety Survey

The Women’s Safety Survey (WSS) provides information on women’s safety at home and in the community and, in particular, on the nature and extent of violence against women in Australia. It also collected information about experiences of physical and sexual violence which could have led to prosecution as a crime under State and Territory laws.

The survey found that during the previous 12 months, 490,400 (7.1%) Australian women aged 18 years and over experienced an incident of violence. When women were asked about their experience of violence since the age of 15, the survey found that 2.6 million (38.4%) women experienced one or more incidents of violence.

As shown in table 11.5, women were more likely to experience physical violence than sexual violence. Almost one-third of women who had

experienced violence since the age of 15 years had experienced both physical and sexual violence. This compared with one-tenth of women who had experienced both physical and sexual violence during the 12 months preceding the survey.

| 11.5 WOMEN'S EXPERIENCE OF VIOLENCE, 1996 |                           |      |                     |      |
|-------------------------------------------|---------------------------|------|---------------------|------|
| Offence/category                          | During the last 12 months |      | Since the age of 15 |      |
|                                           | '000                      | %    | '000                | %    |
| Physical violence only                    | 357.3                     | 72.9 | 1 411.3             | 53.5 |
| Sexual violence only                      | 86.0                      | 18.5 | 399.8               | 15.1 |
| Both physical and sexual violence         | 47.1                      | 9.6  | 828.6               | 31.4 |

Source: Women's Safety, Australia, 1996 (4128.0).

Crimes recorded by police

In 1996 the number of victims recorded by police rose from the previous year for all the offence categories except murder and motor vehicle theft (table 11.6). Nationally, offences against property (unlawful entry with intent, motor vehicle theft and other theft) were far more common than offences against the person (murder, attempted murder, manslaughter, driving causing death, assault, sexual assault and kidnapping/abduction).

Personal crime

Assault is the most common category of offences recorded against the person. Table 11.6 shows that police recorded 113,535 victims of assault nationally during 1996, representing a victimisation rate of 620 victims per 100,000 persons. There were 14,394 cases of sexual assault recorded, a rate of 78 victims per 100,000 persons, and 311 cases of murder, a rate of 1.7 victims per 100,000 persons. Males had higher recorded assault rates than females across all age groups and were more likely to be victims of murder, whereas females were more likely to be victims of sexual assault.

Victimisation rates for both sexual assault and kidnapping were highest among young people. Table 11.7 and graph 11.8 indicates that victims under the age of 19 years represent 61% of sexual assault victims and 55% of kidnapping/abduction victims. Victims aged 25–34 years are more likely to be victims of assault and murder.

## 11.6 VICTIMS OF CRIME RECORDED BY POLICE, Number and Rate

| Offence category            | 1994     | 1995     | 1996     |
|-----------------------------|----------|----------|----------|
| NUMBER                      |          |          |          |
| Homicide                    |          |          |          |
| Murder                      | 288      | 325      | 311      |
| Attempted murder            | 336      | 299      | 331      |
| Manslaughter                | 32       | 31       | 37       |
| Driving causing death       | 197      | 318      | 339      |
| Assault(a)                  | n.a.     | 101 267  | 113 535  |
| Sexual assault              | 12 722   | 12 962   | 14 394   |
| Kidnapping/abduction        | 546      | 467      | 479      |
| Robbery                     |          |          |          |
| Armed robbery               | 5 046    | 5 255    | 6 217    |
| Unarmed robbery             | 8 922    | 9 303    | 10 129   |
| Blackmail/extortion         | 156      | 155      | 258      |
| Unlawful entry with intent  | 379 505  | 384 908  | 399 735  |
| Motor vehicle theft         | 119 469  | 126 939  | 122 931  |
| Other theft(a)              | n.a.     | 490 084  | 520 795  |
| RATE PER 100,000 POPULATION |          |          |          |
| Homicide                    |          |          |          |
| Murder                      | 1.61     | 1.80     | 1.70     |
| Attempted murder            | 1.88     | 1.66     | 1.81     |
| Manslaughter                | 0.18     | 0.17     | 0.20     |
| Driving causing death       | 1.10     | 1.76     | 1.85     |
| Assault(a)                  | n.a.     | 560.72   | 620.12   |
| Sexual assault              | 71.32    | 71.77    | 78.62    |
| Kidnapping/abduction        | 3.06     | 2.59     | 2.62     |
| Robbery                     |          |          |          |
| Armed robbery               | 28.29    | 29.10    | 33.96    |
| Unarmed robbery             | 50.02    | 51.51    | 55.32    |
| Blackmail/extortion         | 0.87     | 0.86     | 1.41     |
| Unlawful entry with intent  | 2 127.46 | 2 131.24 | 2 183.33 |
| Motor vehicle theft         | 669.73   | 702.86   | 671.44   |
| Other theft(a)              | n.a.     | 2 713.60 | 2 844.56 |

(a) Assault and Other theft were collected for the first time in 1995.

Source: *National Crime Statistics, 1995 (4510.0); Recorded Crime, Australia, 1996 (4510.0)*.



## 11.7 VICTIMS OF CRIME RECORDED BY POLICE(a), By Age and Sex — 1996

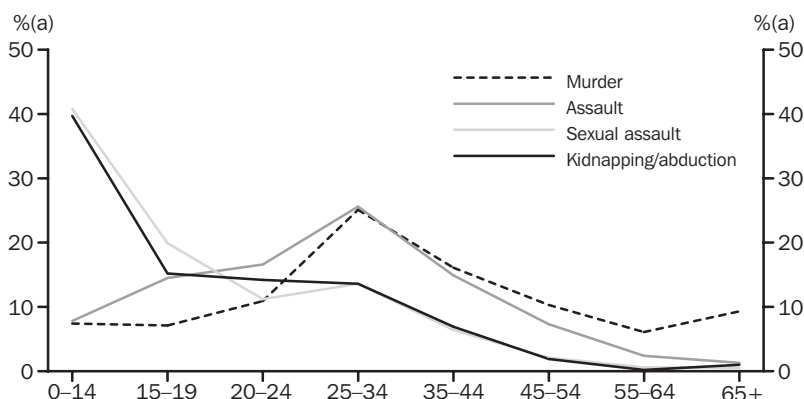
| Offence category                        | 0-14 | 15-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Not specified | Total |
|-----------------------------------------|------|-------|-------|-------|-------|-------|-------|-----|---------------|-------|
| MALES (%)                               |      |       |       |       |       |       |       |     |               |       |
| Homicide                                |      |       |       |       |       |       |       |     |               |       |
| Murder                                  | 3.9  | 4.5   | 8.4   | 18.3  | 10.3  | 7.1   | 4.2   | 6.1 | 4.5           | 67.2  |
| Attempted murder                        | 1.5  | 7.3   | 7.3   | 22.7  | 10.3  | 7.3   | 3.0   | 2.1 | 6.6           | 68.0  |
| Manslaughter                            | 18.9 | 2.7   | —     | 21.6  | 8.1   | 5.4   | 5.4   | 2.7 | 8.1           | 73.0  |
| Driving causing death                   | 0.6  | 2.7   | 6.5   | 4.4   | 3.5   | 2.1   | 1.2   | 2.9 | 0.6           | 24.5  |
| Assault                                 | 5.0  | 8.5   | 9.4   | 14.5  | 8.4   | 4.5   | 1.6   | 0.8 | 3.7           | 56.3  |
| Sexual assault                          | 10.4 | 2.8   | 1.5   | 1.9   | 0.7   | 0.3   | 0.1   | 0.0 | 1.2           | 18.9  |
| Kidnapping/abduction                    | 16.7 | 2.7   | 2.5   | 1.9   | 1.7   | 0.6   | —     | 0.4 | 2.5           | 29.0  |
| Robbery(b)                              |      |       |       |       |       |       |       |     |               |       |
| Armed robbery                           | 3.3  | 10.9  | 11.1  | 13.7  | 10.5  | 8.1   | 3.8   | 1.8 | 3.7           | 66.9  |
| Unarmed robbery                         | 5.8  | 14.8  | 9.9   | 11.1  | 7.2   | 4.6   | 2.5   | 1.9 | 2.1           | 59.8  |
| Blackmail/extortion(b)                  | 1.4  | 10.7  | 4.7   | 10.3  | 12.6  | 12.1  | 6.5   | 2.3 | 9.8           | 70.6  |
| FEMALES (%)                             |      |       |       |       |       |       |       |     |               |       |
| Homicide                                |      |       |       |       |       |       |       |     |               |       |
| Murder                                  | 3.5  | 2.6   | 26.0  | 6.8   | 5.8   | 3.2   | 1.9   | 3.2 | 1.6           | 31.2  |
| Attempted murder                        | 2.4  | 4.5   | 3.0   | 7.3   | 5.1   | 4.8   | 0.6   | 0.3 | 3.0           | 31.1  |
| Manslaughter                            | 8.1  | —     | 2.7   | 2.7   | 5.4   | —     | —     | —   | 2.7           | 21.6  |
| Driving causing death                   | 1.2  | 2.1   | 0.6   | 3.2   | 1.5   | 0.3   | 1.5   | 1.2 | 2.1           | 13.6  |
| Assault                                 | 2.8  | 5.9   | 7.1   | 11.0  | 6.5   | 2.8   | 0.8   | 0.5 | 2.2           | 39.6  |
| Sexual assault                          | 30.3 | 17.0  | 9.7   | 11.6  | 5.6   | 1.8   | 0.5   | 0.4 | 3.0           | 79.9  |
| Kidnapping/abduction                    | 22.8 | 12.5  | 11.7  | 11.5  | 5.2   | 1.3   | 0.2   | 0.6 | 4.0           | 69.7  |
| Robbery(b)                              |      |       |       |       |       |       |       |     |               |       |
| Armed robbery                           | 0.5  | 3.0   | 4.4   | 7.0   | 5.5   | 3.7   | 1.7   | 1.2 | 2.9           | 30.0  |
| Unarmed robbery                         | 1.3  | 3.6   | 4.6   | 6.6   | 6.2   | 5.4   | 3.2   | 5.4 | 1.5           | 38.7  |
| Blackmail/extortion(b)                  | 0.9  | 1.4   | 4.7   | 6.1   | 4.7   | 2.8   | 2.3   | 1.4 | 2.8           | 27.1  |
| TOTAL VICTIMS (INCLUDES NOT STATED) (%) |      |       |       |       |       |       |       |     |               |       |
| Homicide                                |      |       |       |       |       |       |       |     |               |       |
| Murder                                  | 7.4  | 7.1   | 10.9  | 25.1  | 16.1  | 10.3  | 6.1   | 9.3 | 7.7           | 100.0 |
| Attempted murder                        | 3.9  | 11.8  | 10.3  | 30.2  | 15.4  | 12.1  | 3.6   | 2.4 | 10.3          | 100.0 |
| Manslaughter                            | 27.0 | 2.7   | 5.4   | 24.3  | 13.5  | 5.4   | 5.4   | 2.7 | 13.5          | 100.0 |
| Driving causing death                   | 1.8  | 4.7   | 7.1   | 7.7   | 5.0   | 2.4   | 2.7   | 4.1 | 64.6          | 100.0 |
| Assault                                 | 7.8  | 14.5  | 16.6  | 25.6  | 14.9  | 7.3   | 2.4   | 1.3 | 9.6           | 100.0 |
| Sexual assault                          | 40.8 | 19.9  | 11.2  | 13.6  | 6.4   | 2.1   | 0.6   | 0.5 | 5.1           | 100.0 |
| Kidnapping/abduction                    | 39.7 | 15.2  | 14.2  | 13.6  | 6.9   | 1.9   | 0.2   | 1.0 | 7.3           | 100.0 |
| Robbery(b)                              |      |       |       |       |       |       |       |     |               |       |
| Armed robbery                           | 3.8  | 14.0  | 15.5  | 20.9  | 16.1  | 11.8  | 5.5   | 3.0 | 9.5           | 100.0 |
| Unarmed robbery                         | 7.0  | 18.4  | 14.6  | 17.8  | 13.5  | 10.1  | 5.7   | 7.3 | 5.5           | 100.0 |
| Blackmail/extortion(b)                  | 2.3  | 12.1  | 9.3   | 16.4  | 17.3  | 15.4  | 8.9   | 3.7 | 14.5          | 100.0 |

(a) Percentage of total victims for a given offence. (b) For Robbery and Blackmail/Extortion where the victim can be an organisation, figures shown only include person victims.

Source: *Recorded Crime, Australia, 1996 (4510.0)*.



11.8 CRIMES RECORDED BY POLICE, By Age Group — 1996



(a) Percentage of total victims for a given offence.  
Source: Recorded Crime, Australia, 1996 (4510.0).

### Homicide and related offences

Homicide, the unlawful killing of another person, comprises four subcategories: Murder, Attempted murder, Manslaughter and Driving causing death. A total of 687 persons were killed through homicide during 1996 (table 11.6).

Despite the taking of 35 lives in Tasmania in a single incident at Port Arthur, the number of murder victims recorded in Australia fell from 325 in 1995 to 311 in 1996. Males comprised 67% of murder victims, and the highest age-specific rate for victims of murder was for males in the 25–34 year age group (4.0 victims per 100,000 males in this age group).

The majority of murders were committed with some type of weapon (77%), and a firearm was used in 32% of all murders. Attempted murders showed a pattern of weapon use similar to that for murders, while no weapon was used in the majority of manslaughter cases. The most common site for murder, attempted murder and manslaughter offences was a private dwelling.

### Assault

Assault is defined as the direct infliction of force, injury or violence upon a person including attempts or threats.

As indicated in table 11.6, recorded victims of assault rose from 101,267 in 1995 to 113,535 in 1996, an increase of 12%. Males comprised over half of all assault victims. The total male assault rate was 702 victims per 100,000 males, the

highest victimisation rate of assault being for males aged 15–24 years. Males aged over 45 years had assault rates that were substantially lower than the total victimisation rate.

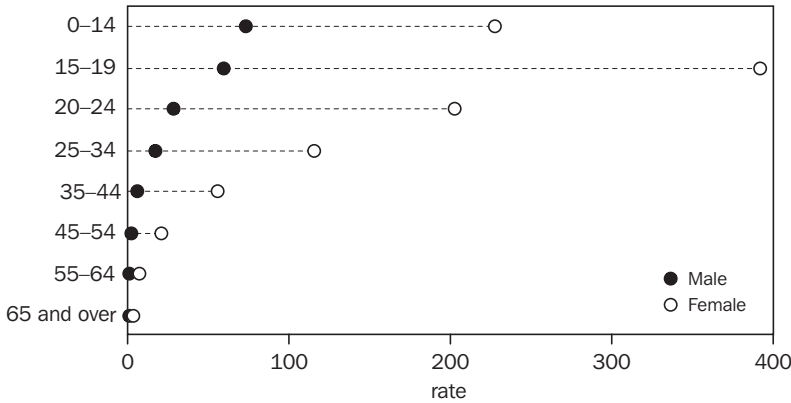
Female victims were more likely to have been assaulted by someone known to them, whereas male victims were more likely to have been assaulted by someone unknown to them. The most frequent locations of assault offences were private dwellings, and streets and footpaths. Weapons were used in 10% of all assaults.

### Sexual assault

Sexual assault is physical assault of a sexual nature directed towards another person where that person does not give consent, or gives consent as a result of intimidation or fraud, or is legally deemed incapable of giving consent because of youth or temporary/permanent incapacity. Police recorded 14,394 victims of sexual assault during 1996, representing a rate of 79 victims per 100,000 persons (table 11.6). Graph 11.9 shows that females in all age groups had a far higher victimisation rate than male victims of sexual assault.

About 80% of sexual assault victims were female, and females aged under 15 years comprised 30% of total victims (table 11.7). For those jurisdictions where the relationship of the offender to the victim was recorded for sexual assault offences, in most cases the offender was a non-family member known to the victim. The most common locations for sexual assault were private dwellings (59% of cases).

11.9 SEXUAL ASSAULT, Victimisation Rates(a), By Sex and Age Group of Victim — 1996



(a) Rates per 100,000 persons.  
Source: Recorded Crime, Australia, 1996 (4510.0).

**Kidnapping/abduction**

Kidnapping/abduction is the unlawful seizing or taking away of another person by force, deception, against that person’s will or against the will of any parent, guardian or other person having lawful custody or care of that person. There were 479 victims of kidnapping/abduction recorded in Australia during 1996, the victimisation rate being 2.6 victims per 100,000 persons (table 11.6).

Table 11.7 shows that females were twice as likely as males to be victims of kidnapping/abduction, accounting for 70% of all victims. About half of the offences occurred on the street or footpath, and a further 21% from private dwellings. Weapon use occurred in less than 15% of recorded kidnappings/abductions.

**Robbery**

Robbery is the unlawful taking of property, without consent, under confrontational circumstances from the immediate possession, control, custody or care of a person, accompanied by force or threat of force or violence and/or by placing the victim in fear. Victims of robbery may be individual persons or organisations. A total of 16,346 victims of robbery were recorded by police in Australia during 1996 (table 11.6). This represents an

increase of 1,788 victims (12%) when compared with 1995.

Organisations were the victims in 41% of the cases of armed robbery in 1996. Where a person was a victim, males were twice as likely to be victims as females. Organisations were much less likely to be victims of unarmed robberies, and again males were more likely to be victims than females. Males in the 15–19 year age group were the most likely victims of unarmed robbery, accounting for 15% of the total person victims for whom the age was recorded (table 11.7). The most common location for armed robberies was retail outlets, while most unarmed robberies occurred on streets and footpaths. A firearm was used in 25% of armed robberies in 1996.

**Firearms**

As table 11.10 and graph 11.11 show, a weapon was used in 77% of recorded murders in 1996, an increase of 11% over 1995. Firearms were used in 32% of murders and 30% of attempted murders in 1996, an increase of 14% and 3% respectively over 1995. While the use of firearms increased for the offences of murder, attempted murder and kidnapping/abduction in 1996, the use of firearms in assaults and sexual assaults remained low (less than 1% for each offence category).

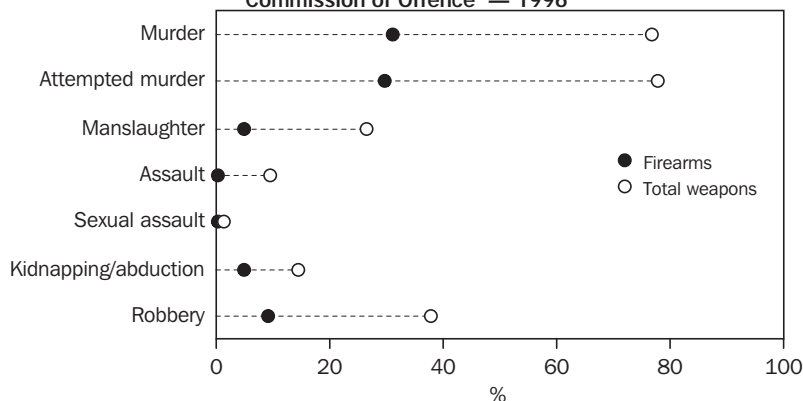
## 11.10 VICTIMS OF REPORTED CRIME(a), By Use of Weapon in Commission of Offence

| Offence category     | Firearm<br>% | Other<br>weapon<br>% | Weapon<br>n.f.d.(b)<br>% | Total<br>weapons<br>% | No<br>weapons<br>% | Total<br>% |
|----------------------|--------------|----------------------|--------------------------|-----------------------|--------------------|------------|
| 1996                 |              |                      |                          |                       |                    |            |
| Homicide             |              |                      |                          |                       |                    |            |
| Murder               | 31.5         | 40.8                 | 4.8                      | 77.2                  | 22.8               | 100.0      |
| Attempted murder     | 30.2         | 45.0                 | 3.0                      | 78.2                  | 21.8               | 100.0      |
| Manslaughter         | 5.4          | 13.5                 | 8.1                      | 27.0                  | 73.0               | 100.0      |
| Assault              | 0.6          | 9.0                  | 0.5                      | 10.0                  | 90.0               | 100.0      |
| Sexual assault       | 0.1          | 1.7                  | 0.0                      | 1.9                   | 98.1               | 100.0      |
| Kidnapping/abduction | 5.4          | 9.0                  | 0.4                      | 14.8                  | 85.2               | 100.0      |
| Robbery              | 9.6          | 24.6                 | 3.9                      | 38.0                  | 62.0               | 100.0      |
| 1995                 |              |                      |                          |                       |                    |            |
| Homicide             |              |                      |                          |                       |                    |            |
| Murder               | 18.4         | 43.3                 | 4.7                      | 66.4                  | 33.6               | 100.0      |
| Attempted murder     | 26.6         | 48.5                 | 0.3                      | 75.4                  | 24.6               | 100.0      |
| Manslaughter         | 13.3         | 6.7                  | —                        | 20.0                  | 80.0               | 100.0      |
| Assault              | 0.6          | 8.9                  | 0.3                      | 9.8                   | 90.2               | 100.0      |
| Sexual assault       | 0.2          | 1.7                  | 0.1                      | 2.0                   | 98.0               | 100.0      |
| Kidnapping/abduction | 2.6          | 7.7                  | 1.1                      | 11.3                  | 88.7               | 100.0      |
| Robbery              | 12.5         | 22.8                 | 4.9                      | 40.3                  | 59.7               | 100.0      |

(a) Victims of robbery refers to individual persons or organisations. All other offence categories used in this table refer to individual persons. (b) Not further defined.

Source: National Crime Statistics, 1995 (4510.0), Recorded Crime, Australia, 1996 (4510.0).

## 11.11 CRIMES RECORDED BY POLICE, By Use of Weapon in Commission of Offence — 1996



Source: Recorded Crime, Australia, 1996 (4510.0).

## Drug offences

To combat the threat posed by the traffic in and abuse of drugs of dependence, perceived to be serious and growing, there is close cooperation between the Commonwealth Government, the State and Territory Governments, the various

police forces and other law enforcement agencies. In addition to other law enforcement agencies, the Australian Customs Service has responsibility for the enforcement of laws controlling the illicit importing and exporting of drugs.

11.12 TOTAL ARRESTS BY DRUG TYPE, 1 July 1995 to 30 June 1996

| Offence category | NSW           | Vic.          | Qld           | SA            | WA            | Tas.         | NT           | ACT          | Aust.         |
|------------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|---------------|
| NUMBER           |               |               |               |               |               |              |              |              |               |
| Cannabis         | 14 677        | 19 120        | 9 436         | 18 477        | 13 903        | 2 518        | 378          | 439          | 78 948        |
| Cocaine          | 269           | 36            | 19            | 4             | 2             | —            | —            | —            | 330           |
| Heroin           | 2 456         | 3 811         | 302           | 150           | 246           | 41           | 29           | 70           | 7 105         |
| Amphetamine      | 1 272         | 1 633         | 560           | 173           | 502           | 42           | 13           | 19           | 4 214         |
| Hallucinogens    | 138           | 2             | 62            | 39            | 142           | 5            | 2            | 8            | 398           |
| Steroids         | 47            | —             | —             | —             | 21            | —            | 1            | 1            | 70            |
| Other drugs      | 519           | 894           | 5 941         | 200           | 152           | 22           | —            | 1            | 7 729         |
| <b>Total</b>     | <b>19 378</b> | <b>25 496</b> | <b>16 320</b> | <b>19 043</b> | <b>14 968</b> | <b>2 628</b> | <b>423</b>   | <b>538</b>   | <b>98 794</b> |
| PROPORTION (%)   |               |               |               |               |               |              |              |              |               |
| Cannabis         | 75.7          | 75.0          | 57.8          | 97.0          | 92.9          | 95.8         | 89.4         | 81.6         | 79.9          |
| Cocaine          | 1.4           | 0.1           | 0.1           | 0.0           | —             | —            | —            | —            | 0.3           |
| Heroin           | 12.7          | 14.9          | 1.9           | 0.8           | 1.6           | 1.6          | 6.9          | 13.0         | 7.2           |
| Amphetamine      | 6.6           | 6.4           | 3.4           | 0.9           | 3.4           | 1.6          | 3.1          | 3.5          | 4.3           |
| Hallucinogens    | 0.7           | 0.0           | 0.4           | 0.2           | 0.9           | 0.2          | 0.5          | 1.5          | 0.4           |
| Steroids         | 0.2           | 0.0           | 0.0           | 0.0           | 0.1           | 0.0          | 0.2          | 0.2          | 0.1           |
| Other drugs      | 2.7           | 3.5           | 36.4          | 1.1           | 1.0           | 0.8          | 0.0          | 0.2          | 7.8           |
| <b>Total</b>     | <b>100.0</b>  | <b>100.0</b>  | <b>100.0</b>  | <b>100.0</b>  | <b>100.0</b>  | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b>  |

Source: Australian Bureau of Criminal Intelligence, *Australian Illicit Drug Report, 1995-96*.

A total of 98,794 arrests were made for drug related offences in Australia during the period 1 July 1995 to 30 June 1996. Table 11.12 shows that by far the largest category of drug arrests was for cannabis, with 78,948 arrests (80% of the national total). Information on the widespread problems arising from drug abuse in Australia, and on how these problems are being approached, is in the *Australian Illicit Drug Report*, produced by the Australian Bureau of Criminal Intelligence (ABCI).

## Outcomes of police investigations

Statistics about the outcomes of investigations describe the status of the processes of police investigation that are initiated following the reporting or detection of an offence. The status of investigations includes:

- investigations that were not finalised, i.e. were still continuing, were pending or suspended;
- investigations that were finalised without an offender being proceeded against because the reported offence was not verified, the complaint was withdrawn, or the alleged offender could not be proceeded against because of some statutory or procedural bar; and

- investigations that were finalised and an offender was proceeded against by initiating court action or some other form of formal proceeding (e.g. a diversionary conference or a caution).

A higher proportion of offences against the person (homicide, assault, sexual assault, kidnapping and abduction, and blackmail and extortion offences) reached a finalised investigative status within 90 days than was the case for offences against property (unlawful entry with intent, theft and motor vehicle theft offences). Similarly, the proportion of offenders proceeded against was higher for offences against the person than for property offences. In the majority of investigations where a finalised outcome was reached, this outcome was reached within 30 days.

Table 11.13 presents national statistics on the outcome of investigations into murder and attempted murder offences recorded by police in the period July to October 1996. The proportions of offenders proceeded against within 90 days of the offence being recorded were 73% and 81% for murder and attempted murder investigations respectively.

11.13 MURDER AND ATTEMPTED MURDER,  
Outcomes of Investigations — 1 July to 31  
October 1996(a)

|                               | Murder        | Attempted murder |
|-------------------------------|---------------|------------------|
| Offence category              | %             | %                |
| <b>30 day status</b>          |               |                  |
| Investigation not finalised   | 28.1          | 18.6             |
| Investigation finalised       |               |                  |
| No offender proceeded against | 4.2           | 2.7              |
| Offender proceeded against    | 67.7          | 78.8             |
| <b>Total</b>                  | <b>100.0</b>  | <b>100.0</b>     |
| <b>90 day status</b>          |               |                  |
| Investigation not finalised   | 22.9          | 15.0             |
| Investigation finalised       |               |                  |
| No offender proceeded against | 4.2           | 3.5              |
| Offender proceeded against    | 72.9          | 81.4             |
| <b>Total</b>                  | <b>100.0</b>  | <b>100.0</b>     |
| <b>Total</b>                  | <b>no. 96</b> | <b>no. 113</b>   |

(a) For those offences recorded by police between 1 July and 31 October 1996.  
Source: *Recorded Crime, Australia, 1996 (4510.0)*.

Courts

Courts exist in all Australian States and Territories for the hearing of both criminal and civil cases. A criminal case arises from a charge laid by police or other prosecuting authorities, and is an allegation of a breach of the law. A civil case, by contrast, is a dispute between two or more individuals or corporations, in which one side is seeking a legal remedy for an injury or loss from the other party who is alleged to be liable.

The courts are arranged in a hierarchy, with the bulk of less serious matters being heard before magistrates and more serious matters being heard before judges. In the civil context, the seriousness of a case is usually determined through the amount of money sought in compensation, while for criminal matters seriousness is determined by the nature of the offence alleged. Figure 11.14 illustrates the arrangement of the court system in Australia.

The hierarchy of courts also applies to the system of appeals. Appeals are available to the losing side in a civil matter, and to the defendant in a criminal matter, from all levels of court. The High Court of Australia is the highest court of appeal for both criminal and civil cases.

While the civil jurisdiction and system of appeals are important aspects of the justice system, the

section below focuses on the criminal jurisdiction of the courts.

Criminal courts

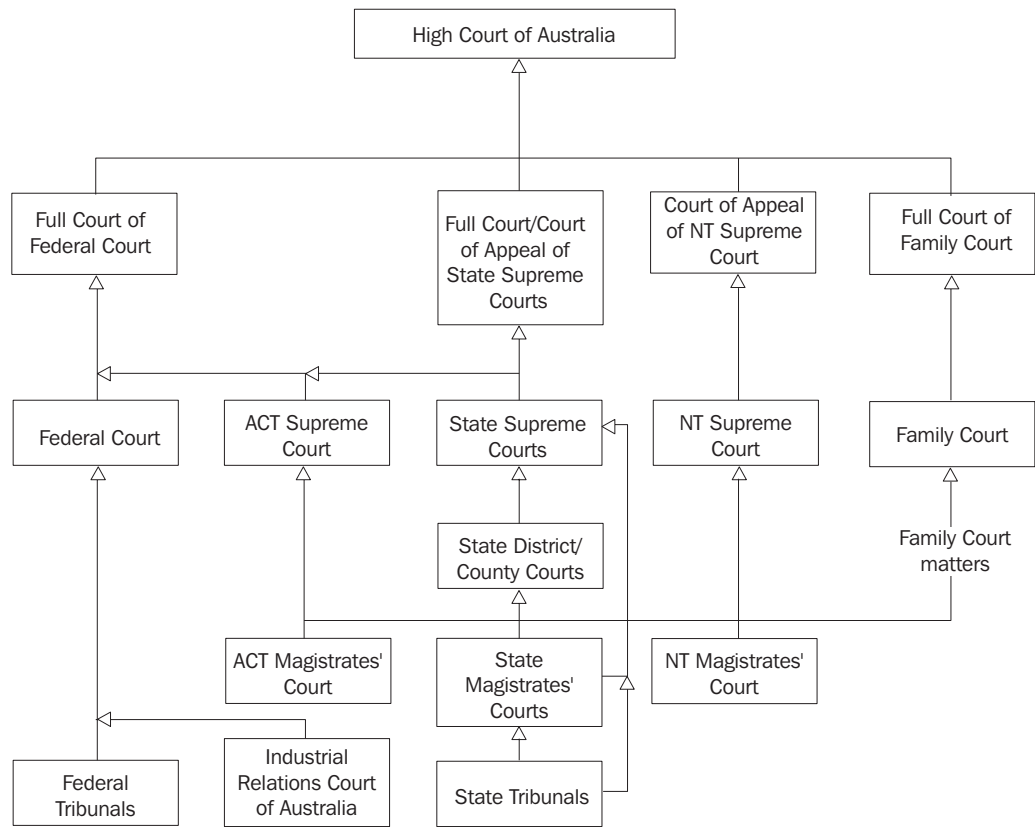
All Australian States and Territories have a system of courts for the hearing of criminal matters. Once charges are laid by police, the court will hear evidence by both prosecution and defence, and will make a decision as to the guilt or innocence of the defendant. In cases where the defendant is found guilty, the court may also record a conviction and impose a penalty.

The courts in Australia are arranged hierarchically. The lowest level of criminal court is the Magistrates' Court or court of summary jurisdiction. The majority of all criminal cases are heard in these courts. Cases heard in Magistrates' Courts do not involve a jury; the magistrate acts to determine the guilt of the defendant. This is known as a summary proceeding. Only relatively minor offences can be dealt with in this way. More serious offences are dealt with by the higher levels of court. All States and Territories have a Supreme Court, which can deal with all criminal matters. The larger jurisdictions also have an intermediate level of court, known as the District or County Court, which deals with the less serious offences.

All offences which are dealt with by the higher courts have an automatic entitlement to a trial before a judge and jury. In some jurisdictions, the defendant may elect to have the matter heard before a judge alone. Offences which must be heard before a judge and jury are known as indictable offences. These include offences such as murder and drug importation as well as serious sexual offences, robberies and assaults.

The defendant in a criminal matter is entitled to appeal against the conviction or the severity of penalty imposed. Under some circumstances, the prosecution is also entitled to appeal against the leniency of the penalty. The States and Territories differ in the ways in which appeals are dealt with. Some appeals from Magistrates' Courts may be heard before the Intermediate courts. In other jurisdictions the Supreme Court may hear these appeals. In most jurisdictions, an appeal court or Court of Criminal Appeal may be constituted to hear appeals from the Supreme or Intermediate courts. In Australia, the highest court of appeal from all jurisdictions is the High Court of Australia.

11.14    MAJOR RELATIONSHIPS BETWEEN COURTS IN AUSTRALIA



Source: Industry Commission, Report on Government Service Provision, Steering Committee for the Review of Commonwealth/State Service Provision, 1997.

**National criminal courts statistics**

The aim of national criminal courts statistics is to provide comparable data across the States and Territories. The data provided are indicators of the volume and flow of criminal matters through the Supreme and Intermediate courts (together comprising the higher courts), and provide a basis for measuring changes over time.

**Higher criminal courts**

Table 11.15 summarises the flow of defendants through the higher courts during 1995. The

workload of the criminal courts can be shown by the number of defendants involved in cases started before 1995 and still being processed (pending at start) and the number of defendants with cases started in the higher courts during 1995 (initiated). Excluding defendants in Queensland, there were 6,424 defendants pending at the start of 1995 and 10,635 defendants initiated during 1995, giving a total workload of 17,059 defendants who had criminal cases active at some time during 1995. Of this total workload 10,740 defendants (63%) were finalised in the higher courts during 1995.

**11.15 DEFENDANTS INITIATED, FINALISED AND PENDING, 1995(a)**

| Court level/Status                                 | NSW   | Vic.  | Qld(b) | SA    | WA    | Tas. | NT  | ACT | Aust.(b) |
|----------------------------------------------------|-------|-------|--------|-------|-------|------|-----|-----|----------|
| SUPREME COURT                                      |       |       |        |       |       |      |     |     |          |
| Pending at start                                   | 118   | 52    | n.a.   | 72    | 182   | 100  | 100 | 70  | n.a.     |
| Initiated                                          | 135   | 112   | n.a.   | 285   | 401   | 307  | 239 | 119 | n.a.     |
| Finalised                                          | 104   | 100   | 655    | 270   | 387   | 312  | 210 | 101 | 2 139    |
| Pending at end                                     | 149   | 64    | n.a.   | 87    | 196   | 95   | 129 | 88  | n.a.     |
| INTERMEDIATE COURT(c)                              |       |       |        |       |       |      |     |     |          |
| Pending at start                                   | 2 952 | 1 117 | n.a.   | 532   | 1 129 | —    | —   | —   | n.a.     |
| Initiated                                          | 4 328 | 1 466 | n.a.   | 1 333 | 1 910 | —    | —   | —   | n.a.     |
| Finalised                                          | 4 209 | 1 600 | 5 900  | 1 312 | 2 135 | —    | —   | —   | 15 156   |
| Pending at end                                     | 3 071 | 983   | n.a.   | 553   | 904   | —    | —   | —   | n.a.     |
| TOTAL SUPREME AND INTERMEDIATE COURTS(c)           |       |       |        |       |       |      |     |     |          |
| Pending at start                                   | 3 070 | 1 169 | n.a.   | 604   | 1 311 | 100  | 100 | 70  | n.a.     |
| Initiated                                          | 4 463 | 1 578 | n.a.   | 1 618 | 2 311 | 307  | 239 | 119 | n.a.     |
| Finalised                                          | 4 313 | 1 700 | 6 555  | 1 582 | 2 522 | 312  | 210 | 101 | 17 295   |
| Pending at end                                     | 3 220 | 1 047 | n.a.   | 640   | 1 100 | 95   | 129 | 88  | n.a.     |
| RATE PER 100,000 POPULATION AGED 17 YEARS AND OVER |       |       |        |       |       |      |     |     |          |
| Pending at start                                   | 66    | 34    | n.a.   | 53    | 101   | 28   | 83  | 31  | n.a.     |
| Total initiated                                    | 96    | 46    | n.a.   | 143   | 179   | 87   | 198 | 52  | n.a.     |
| Total finalised                                    | 93    | 49    | 266    | 139   | 195   | 88   | 174 | 44  | 126      |
| Pending at end                                     | 69    | 30    | n.a.   | 56    | 85    | 27   | 107 | 38  | n.a.     |

(a) Data exclude defendants in appeal cases. (b) Data about initiated and pending defendants are not available for Queensland, and the data for finalised defendants exclude any transfers between court levels or bench warrants being issued. (c) There is no Intermediate court in Tasmania, the Northern Territory or the Australian Capital Territory.

Source: *Australian Criminal Courts, 1995* (4513.0).

Table 11.16 indicates the methods by which defendants involved in criminal cases were finalised in the higher court system in 1995. A defendant is regarded as finalised when all the charges laid against them have been concluded in some manner. A total of 17,295 defendants were finalised in the higher criminal courts during 1995. Of the 14,408 defendants finalised as a result of the charges being adjudicated, 89%

had at least one charge with a proven outcome (guilty verdict or guilty plea) while the other 11% were acquitted. Where information was available about the process of determining whether or not the defendant was guilty, the data showed that three-quarters of those defendants who were finalised as a result of charges being laid pleaded guilty.

#### 11.16 DEFENDANTS FINALISED, By Method of Finalisation — 1995(a)

| Method of finalisation                          | NSW   | Vic.  | Qld      | SA    | WA(b) | Tas. | NT  | ACT | Aust.(b)  |
|-------------------------------------------------|-------|-------|----------|-------|-------|------|-----|-----|-----------|
| <b>SUPREME COURT</b>                            |       |       |          |       |       |      |     |     |           |
| Proven not guilty                               | 18    | 17    | 24       | 38    | 38    | 11   | 11  | 5   | 162       |
| <i>Total proven guilty</i>                      | 73    | 66    | 565      | 158   | 290   | 230  | 166 | 75  | 1 623     |
| Guilty verdict                                  | 25    | 25    | 64       | 70    | 78    | 32   | 23  | 18  | 335       |
| Guilty plea                                     | 48    | 41    | 501      | 88    | 212   | 198  | 143 | 57  | 1 288     |
| Transfer between court levels                   | 4     | 9     | n.a.     | 26    | 28    | 5    | 0   | 5   | (c)77     |
| <i>Non-adjudicated</i>                          | 9     | 8     | (c)66    | 48    | 31    | 66   | 33  | 16  | (c)277    |
| Bench warrant issued                            | 3     | —     | n.a.     | 9     | 6     | 10   | 24  | 1   | n.a.      |
| Withdrawn(d)                                    | 6     | 8     | 66       | 39    | 25    | 56   | 9   | 15  | 224       |
| <i>Total defendants finalised</i>               | 104   | 100   | (c)655   | 270   | 387   | 312  | 210 | 101 | (c)2 139  |
| <b>INTERMEDIATE COURT(e)</b>                    |       |       |          |       |       |      |     |     |           |
| Proven not guilty                               | 500   | 194   | 323      | 85    | 287   | ..   | ..  | ..  | 1 389     |
| <i>Total proven guilty</i>                      | 3 150 | 1 268 | 4 510    | 709   | 1 597 | ..   | ..  | ..  | 11 234    |
| Guilty verdict                                  | 387   | 162   | n.a.     | 108   | n.a.  | ..   | ..  | ..  | n.a.      |
| Guilty plea                                     | 2 763 | 1 106 | n.a.     | 601   | n.a.  | ..   | ..  | ..  | n.a.      |
| Transfer between court levels                   | 20    | 6     | n.a.     | 191   | 39    | ..   | ..  | ..  | (c)256    |
| <i>Non-adjudicated</i>                          | 539   | 132   | (c)1 067 | 327   | 212   | ..   | ..  | ..  | (c)2 277  |
| Bench warrant issued                            | 232   | 19    | n.a.     | 102   | 71    | ..   | ..  | ..  | n.a.      |
| Withdrawn(d)                                    | 307   | 113   | 1 067    | 225   | 141   | ..   | ..  | ..  | 1 853     |
| <i>Total defendants finalised</i>               | 4 209 | 1 600 | (c)5 900 | 1 312 | 2 135 | ..   | ..  | ..  | (c)15 156 |
| <b>TOTAL SUPREME AND INTERMEDIATE COURTS(e)</b> |       |       |          |       |       |      |     |     |           |
| Proven not guilty                               | 518   | 211   | 347      | 123   | 325   | 11   | 11  | 5   | 1 551     |
| <i>Total proven guilty</i>                      | 3 223 | 1 334 | 5 075    | 867   | 1 887 | 230  | 166 | 75  | 12 857    |
| Guilty verdict                                  | 412   | 187   | n.a.     | 178   | n.a.  | 32   | 23  | 18  | n.a.      |
| Guilty plea                                     | 2 811 | 1 147 | n.a.     | 689   | n.a.  | 198  | 143 | 57  | n.a.      |
| Transfer between court levels                   | 24    | 15    | n.a.     | 217   | 67    | 5    | —   | 5   | (c)333    |
| <i>Non-adjudicated</i>                          | 548   | 140   | (c)1 133 | 375   | 243   | 66   | 33  | 16  | (c)2 554  |
| Bench warrant issued                            | 235   | 19    | n.a.     | 111   | 77    | 10   | 24  | 1   | n.a.      |
| Withdrawn(d)                                    | 313   | 121   | 1 133    | 264   | 166   | 56   | 9   | 15  | 2 077     |
| <i>Total defendants finalised</i>               | 4 313 | 1 700 | (c)6 555 | 1 582 | 2 522 | 312  | 210 | 101 | (c)17 295 |

(a) Data exclude defendants finalised in appeal cases. (b) The distinction between whether a defendant pleaded guilty or was found guilty by a court cannot currently be determined for the Intermediate court in Western Australia. (c) These totals exclude Queensland defendants finalised by a transfer between court levels and/or by a bench warrant being issued. (d) Withdrawn includes defendants who were withdrawn by the prosecution, died, were unfit to plead or were finalised by some other non-adjudicated method. (e) There is no Intermediate court in Tasmania, the Northern Territory or the Australian Capital Territory.

Source: Australian Criminal Courts, 1995 (4513.0).



Median duration provides one measure of the speed with which the higher courts deal with their criminal workload. It should be noted that many different factors may influence a higher court's ability to process cases and defendants. Table 11.17 provides median duration statistics from initiation to finalisation for defendants in each State and Territory except Queensland.

The median duration is longer for some methods of finalisation than for others: in most States and Territories it takes longer for a defendant to be finalised if they have a guilty verdict than if they plead guilty or if they are

proven not guilty. The median duration was longest in the Australian Capital Territory and New South Wales at 29.0 weeks and 27.0 weeks respectively, and shortest in Tasmania, South Australia and Western Australia at 12.1 weeks, 16.0 weeks, and 16.1 weeks respectively.

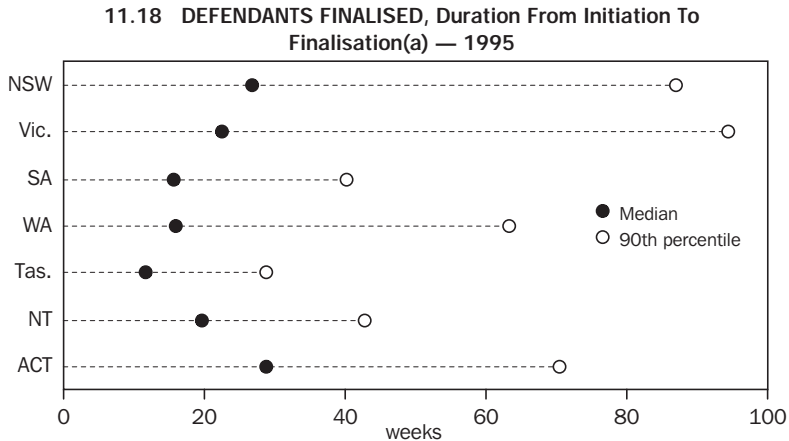
In Tasmania, 90% of defendants finalised during 1995 had their cases completed in less than 30 weeks, which was the fastest processing time for any State/Territory, as shown in graph 11.18. Victoria had the slowest processing time to finalise 90% of defendants, taking almost 95 weeks.

**11.17 MEDIAN DURATION (WEEKS) TO FINALISATION FOR DEFENDANTS, 1995(a)**

| Court level/Method of finalisation              | NSW         | Vic.        | Qld(b)      | SA          | WA(c)       | Tas.        | NT          | ACT         |
|-------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>SUPREME COURT</b>                            |             |             |             |             |             |             |             |             |
| Proven not guilty                               | 58.4        | 26.0        | n.a.        | 2.6         | 41.7        | 13.7        | 40.1        | 36.0        |
| Guilty verdict                                  | 50.7        | 35.8        | n.a.        | 15.2        | 36.6        | 16.1        | 31.6        | 39.1        |
| Guilty plea                                     | 50.2        | 20.3        | n.a.        | 9.2         | 12.6        | 11.2        | 17.1        | 16.4        |
| Other finalisation(d)                           | 33.8        | 17.0        | n.a.        | 6.8         | 15.3        | 12.9        | 9.9         | 34.2        |
| <i>Total defendants finalised</i>               | <i>50.7</i> | <i>24.6</i> | <i>n.a.</i> | <i>7.8</i>  | <i>17.1</i> | <i>12.1</i> | <i>19.9</i> | <i>29.0</i> |
| <b>INTERMEDIATE COURT(e)</b>                    |             |             |             |             |             |             |             |             |
| Proven not guilty                               | 45.6        | 36.9        | n.a.        | 26.0        | 43.2        | ..          | ..          | ..          |
| Guilty verdict                                  | 54.8        | 38.9        | n.a.        | 29.4        | n.a.        | ..          | ..          | ..          |
| Guilty plea                                     | 21.7        | 17.1        | n.a.        | 15.1        | n.a.        | ..          | ..          | ..          |
| Other finalisation(d)                           | 28.1        | 36.3        | n.a.        | 15.9        | 16.0        | ..          | ..          | ..          |
| <i>Total defendants finalised</i>               | <i>26.4</i> | <i>22.4</i> | <i>n.a.</i> | <i>17.0</i> | <i>15.9</i> | <i>..</i>   | <i>..</i>   | <i>..</i>   |
| <b>TOTAL SUPREME AND INTERMEDIATE COURTS(e)</b> |             |             |             |             |             |             |             |             |
| Proven not guilty                               | 46.3        | 35.2        | n.a.        | 21.3        | 43.1        | 13.7        | 40.1        | 36.0        |
| Guilty verdict                                  | 54.3        | 38.0        | n.a.        | 25.6        | n.a.        | 16.1        | 31.6        | 39.1        |
| Guilty plea                                     | 22.1        | 17.3        | n.a.        | 14.0        | n.a.        | 11.2        | 17.1        | 16.4        |
| Other finalisation(d)                           | 28.5        | 35.7        | n.a.        | 15.1        | 15.8        | 12.9        | 9.9         | 34.2        |
| <b>Total defendants finalised</b>               | <b>27.0</b> | <b>22.8</b> | <b>n.a.</b> | <b>16.0</b> | <b>16.1</b> | <b>12.1</b> | <b>19.9</b> | <b>29.0</b> |

(a) Data exclude defendants finalised in appeal cases. (b) Initiation data required for duration calculations are not currently available for Queensland. (c) The distinction between whether a defendant pleaded guilty or was found guilty by a court cannot currently be determined for the Intermediate court in Western Australia. (d) Defendants who were transferred to another level of court or where the charge/s are unadjudicated (e.g. the charge/s are withdrawn by the prosecution, the defendant dies, a bench warrant is issued, the defendant is deemed unfit to plead). (e) There is no Intermediate court in Tasmania, the Northern Territory or the Australian Capital Territory.

Source: *Australian Criminal Courts, 1995 (4513.0)*.



(a) Excludes Queensland.  
Source: Australian Criminal Courts, 1995 (4513.0).

**Total criminal cases**

Table 11.19 shows the total number of criminal cases handled in the courts of Australia, including appeal and non-appeal cases. Of all the criminal cases filed in Australia during 1995–96, 98% were filed in the Magistrates’ Courts, with New South Wales and Victoria contributing 60% to the national total.

Table 11.20 indicates the types of cases heard in each level of criminal court during 1995–96. Appeal cases make up a substantial proportion of the workload of the Supreme and Intermediate criminal courts. A large proportion of cases in the Magistrates’ Court in most States and Territories are minor traffic matters.

**11.19 CRIMINAL COURT CASES, By Court Level — 1995–96(a)**

|                          | NSW          | Vic.         | Qld          | SA           | WA           | Tas.        | NT          | ACT         | Aust.          |
|--------------------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|----------------|
| Court level              | '000         | '000         | '000         | '000         | '000         | '000        | '000        | '000        | '000           |
| Supreme Court            | 0.9          | 0.4          | 1.4          | 0.6          | 0.5          | 0.4         | 0.4         | 0.2         | 4.8            |
| District/County Court(b) | 10.6         | 3.8          | 7.1          | 1.8          | 2.2          | ..          | ..          | ..          | 25.5           |
| Magistrates Court        | 393.0        | 488.0        | 248.0        | 119.0        | 147.0        | 25.9        | 19.0        | 13.0        | 1 452.9        |
| <b>Total</b>             | <b>404.5</b> | <b>492.2</b> | <b>256.5</b> | <b>121.4</b> | <b>149.7</b> | <b>26.3</b> | <b>19.4</b> | <b>13.2</b> | <b>1 483.2</b> |

(a) Data include appeal and non-appeal cases. (b) The Northern Territory, the Australian Capital Territory and Tasmania do not have District/County Courts.

Source: Industry Commission, *Report on Government Service Provision, Steering Committee for the Review of Commonwealth/State Service Provision*, 1997.

**11.20 PROPORTION OF CRIMINAL COURT CASES, By Type — 1995–96**

|                              | NSW          | Vic.         | Qld          | SA           | WA           | Tas.         | NT           | ACT          | Average      |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Court level                  | %            | %            | %            | %            | %            | %            | %            | %            | %            |
| <b>SUPREME COURT</b>         |              |              |              |              |              |              |              |              |              |
| Appeals                      | 86.7         | 74.1         | 42.2         | 35.9         | 16.0         | 35.2         | 16.9         | 17.8         | 46.6         |
| Non-Appeals                  | 13.3         | 25.9         | 57.8         | 64.1         | 84.0         | 64.8         | 83.1         | 82.2         | 53.5         |
| <i>Total</i>                 | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| <b>INTERMEDIATE COURT(a)</b> |              |              |              |              |              |              |              |              |              |
| Appeals                      | 57.6         | 66.1         | 3.0          | n.a.         | n.a.         | ..           | ..           | ..           | 34.6         |
| Non-Appeals                  | 42.4         | 33.9         | 97.0         | n.a.         | n.a.         | ..           | ..           | ..           | 65.3         |
| <i>Total</i>                 | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>n.a.</i>  | <i>n.a.</i>  | <i>..</i>    | <i>..</i>    | <i>..</i>    | <i>100.0</i> |
| <b>MAGISTRATE'S COURT</b>    |              |              |              |              |              |              |              |              |              |
| Minor traffic matters        | 57.6         | 79.3         | 31.3         | 45.6         | 37.6         | n.a.         | 38.0         | n.a.         | 55.9         |
| Other offences               | 42.4         | 21.7         | 68.7         | 54.4         | 62.4         | 100.0        | 62.0         | 100.0        | 44.1         |
| <i>Total</i>                 | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |

(a) There is no Intermediate court in Tasmania, the Northern Territory or the Australian Capital Territory.

Source: Industry Commission, *Report on Government Service Provision, Steering Committee for the Review of Commonwealth/State Service Provision, 1997.*

## Correctional services

Correctional services are responsible for administering those penalties handed down by the criminal courts which require some form of supervision of the offender. This may include imprisonment on either a full or part-time basis, community service and other forms of supervised work, home detention or good behaviour bonds under supervision.

All States and the Northern Territory operate prisons and other correctional services. Separate provisions exist in each State and Territory for dealing with juvenile offenders. Convicted adult prisoners from the Australian Capital Territory serve their sentences in New South Wales prisons, but local provision is made for the short-term custody of remand prisoners, and for probation and parole services. The Commonwealth Government does not operate any prisons or other correctional services, and federal offenders (persons convicted of offences under Commonwealth laws) fall within the jurisdiction of State agencies for correctional purposes.

A number of jurisdictions have established or are examining the possibility of establishing privately operated prison facilities. These prisons compete with State operated facilities for the governments' business and are monitored by the Correctional Services authorities in a similar manner to State operated prisons. There is likely to be an increasing trend towards this type of arrangement in future.

## Prisoners in Australia

The annual prison census, conducted on the night of 30 June, counts all persons, convicted or not convicted, who are held in custody in gazetted Australian prisons for adult offenders (i.e. those aged 18 and over). The annual prison census was conducted by the Australian Institute of Criminology from 1982 to 1993, and by the ABS since 1994. Prison census data provide a snapshot of the number of persons in prison on a single day, and are not representative of the flow of prisoners. The majority of prisoners in the prison census are serving long sentences for relatively serious offences, but the flow of offenders in and out of prisons consists primarily of persons serving short sentences for relatively minor offences.

Based on the results of the prison census, the total prison population in Australia increased from 9,826 in 1982 to 17,428 in 1995. The unsentenced prisoner population, namely prisoners awaiting a court hearing or trial, increased from 996 in 1982 to 1,999 in 1995, while the population of sentenced prisoners increased from 8,830 in 1982 to 15,429 in 1995. Factors influencing the size of the prison population over this period include legislative changes affecting the length of time prisoners spend in gaol; the abolition of sentence reducing mechanisms such as remission; significant court delays leading to an increase in unsentenced prisoners in some jurisdictions; and changes to the ways in which minor offences are dealt with, particularly fine default. Graph 11.21 shows a time series of the rate of adult prisoners per 100,000 adult population. The rate has slowly increased since 1989.

Imprisonment is the most serious penalty which can be imposed by Australian courts. Prisoners who are convicted of more serious offences comprise the majority of the prisoners recorded in the prison census. In 1995 violent and sexual offences accounted for 48% of the offences for which sentenced prisoners were in gaol. Property offences also accounted for a relatively high proportion of the offences for sentenced prisoners, with 28% of all sentenced prisoners in gaol for some form of property offence in 1995.

The majority of prisoners in Australia in 1995 were male (95%). Prisoners also tended to be relatively young (median age of 30 years). There was variation in the types of offences for which men and women were sentenced to imprisonment, reflecting the differences in the patterns of offending between men and women. The most common offences for males in 1995 were sexual offences, break and enter, robbery and assault. For women, the most common

offences were fraud and misappropriation, dealing and trafficking in drugs, and break and enter.

The largest proportion of prisoners (44%) were held in New South Wales prisons. The next largest jurisdiction was Queensland, with 16% of the total prison population. Victoria had 15% of the total prison population.

Table 11.22 shows the average daily population of prisoners, by sex and jurisdiction. In March 1997, the prison population in Australia averaged 16,871, a rate of 121.1 per 100,000 adult population.

Imprisonment rates vary between jurisdictions (graph 11.23). In March 1997 the highest average daily prison population rate (435.2 per 100,000 adult population) was recorded by the Northern Territory, over twice the next highest rate, recorded in Western Australia (168.5 per 100,000 adult population).



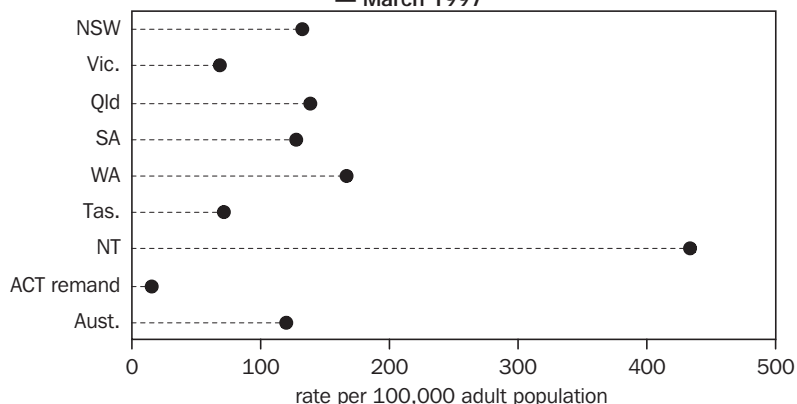
(a) The data are a snapshot of the prison population as at 30 June each year.  
Source: Australian Prisoners, Results of the National Prison Census, Australian Institute of Criminology, 1982 to 1993. Prisoners in Australia, 1994 and 1995 — A report prepared for the Corrective Services Ministers' Council by the National Correctional Services Statistics Unit, ABS.

**11.22 AVERAGE DAILY PRISONER POPULATION, By Sex — March 1997**

| Offence category        | NSW   | Vic.  | Qld   | SA    | WA    | Tas.  | NT    | ACT in<br>NSW(a) | ACT<br>remand | Aust.         |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|------------------|---------------|---------------|
| NUMBER                  |       |       |       |       |       |       |       |                  |               |               |
| Males                   | 5 996 | 2 310 | 3 367 | 1 392 | 2 106 | 253   | 549   | 106              | 38            | <b>16 011</b> |
| Females                 | 330   | 126   | 167   | 79    | 133   | 9     | 14    | 8                | 2             | <b>860</b>    |
| Persons                 | 6 326 | 2 436 | 3 534 | 1 471 | 2 239 | 262   | 562   | 114              | 40            | <b>16 871</b> |
| RATE PER 100,000 ADULTS |       |       |       |       |       |       |       |                  |               |               |
| Males                   | 257.6 | 135.2 | 268.9 | 250.3 | 317.4 | 146.0 | 800.6 | 93.0             | 33.4          | <b>233.2</b>  |
| Females                 | 13.7  | 7.0   | 13.2  | 13.6  | 20.0  | 4.8   | 22.8  | 6.8              | 1.8           | <b>12.2</b>   |
| Persons                 | 133.6 | 69.6  | 140.2 | 129.4 | 168.5 | 73.7  | 435.2 | 49.2             | 17.4          | <b>121.1</b>  |

(a) Prisoners sentenced to full-time custody in the Australian Capital Territory are held in New South Wales prisons and are included in the New South Wales figures. The Australian Capital Territory in New South Wales figures are a subset of the New South Wales figures and are not included in the totals for Australia.

Source: *National Correctional Statistics: Prisons, March Quarter 1997 — A report prepared for the Corrective Services Ministers' Council by the National Correctional Services Statistics Unit, ABS.*

**11.23 AVERAGE DAILY IMPRISONMENT RATES, Adult population — March 1997**

Source: *National Correctional Statistics: Prisons, March Quarter 1997 — A report prepared for the Corrective Services Ministers' Council by the National Correctional Services Statistics Unit, ABS.*

**Most serious offence**

Table 11.24 shows, for 1995, the proportion of sentenced prisoners for each most serious offence category for each State and Territory, and for Australia as a whole. For example, the national proportion of sentenced prisoners with driving offences as the most serious offence was 4%, compared to Tasmania and the Northern Territory with 6% and 7% respectively. Similarly, 9% of prisoners in Tasmania, and 8% in the Northern Territory were in prison due to

licence/registration offences, compared to New South Wales where there was a negligible proportion of prisoners in this category.

Queensland and Western Australia had the greatest proportion of prisoners who were sentenced for sex offences as the most serious offence (19%). The Northern Territory had the greatest proportion of prisoners sentenced for assault offences (18%), compared to Victoria which recorded the lowest proportion (7%).

## 11.24 SENTENCED PRISONERS, By Most Serious Offence(a) — 1995

|                               | NSW   | Vic.  | Qld   | SA    | WA    | Tas.  | NT    | ACT(b) | Aust. | Aust.  |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|--------|-------|--------|
|                               | %     | %     | %     | %     | %     | %     | %     | %      | %     | no.    |
| Homicide                      |       |       |       |       |       |       |       |        |       |        |
| Murder                        | 4.6   | 9.7   | 8.2   | 7.1   | 6.0   | 16.9  | 5.5   | —      | 6.4   | 995    |
| Other homicide                | 2.5   | 3.0   | 4.1   | 2.3   | 2.3   | 2.5   | 7.9   | —      | 2.9   | 453    |
| Assault                       | 11.5  | 7.3   | 12.4  | 14.6  | 11.9  | 10.9  | 17.5  | —      | 11.5  | 1 775  |
| Sex offences                  | 9.9   | 16.7  | 19.1  | 9.8   | 19.1  | 6.0   | 13.7  | —      | 13.5  | 2 090  |
| Other against person          | 0.6   | 2.5   | 0.7   | 2.0   | 1.2   | —     | 1.9   | —      | 1.1   | 167    |
| Robbery                       | 12.9  | 10.0  | 15.4  | 12.3  | 12.3  | 11.4  | 4.8   | —      | 12.5  | 1 933  |
| Extortion                     | 0.4   | 0.3   | 0.1   | 0.3   | 0.1   | —     | —     | —      | 0.3   | 40     |
| Break and enter               | 13.0  | 10.4  | 14.3  | 15.0  | 15.0  | 13.4  | 9.1   | —      | 13.2  | 2 032  |
| Fraud and misappropriation    | 5.2   | 4.4   | 2.6   | 8.7   | 3.3   | 2.0   | 1.4   | —      | 4.5   | 700    |
| Receiving                     | 2.7   | 0.8   | 0.9   | 2.2   | 0.8   | 3.5   | 0.2   | —      | 1.8   | 280    |
| Other theft                   | 7.4   | 9.9   | 3.9   | 2.3   | 6.1   | 8.5   | 10.1  | —      | 6.7   | 1 035  |
| Property damage(c)            | 1.4   | 1.0   | 1.7   | 1.1   | 1.7   | 3.0   | 2.4   | —      | 1.5   | 227    |
| Government security(d)        | 5.8   | 7.9   | 4.2   | 6.8   | 6.9   | 6.5   | 7.2   | —      | 6.1   | 942    |
| Possession of weapon          | 0.4   | —     | 0.1   | 0.1   | 0.1   | —     | 0.2   | —      | 0.2   | 32     |
| Other against good order      | 0.2   | 0.9   | 0.2   | 1.1   | 0.7   | —     | 0.2   | —      | 0.4   | 67     |
| Possession/use drugs          | 0.9   | 0.7   | 1.6   | 1.0   | 0.8   | —     | 1.4   | —      | 1.0   | 149    |
| Deal/traffic drugs            | 12.8  | 8.8   | 3.7   | 4.3   | 5.9   | 1.5   | 0.2   | —      | 8.8   | 1 351  |
| Manufacture/grow drugs        | 2.0   | 0.1   | 1.0   | 1.2   | 0.4   | —     | 1.7   | —      | 1.3   | 194    |
| Driving offences              | 5.6   | 0.8   | 2.3   | 3.1   | 2.1   | 5.5   | 6.7   | —      | 3.8   | 591    |
| Licence/registration offences | —     | 4.3   | 2.8   | 3.9   | 2.1   | 8.5   | 7.5   | —      | 1.9   | 296    |
| Other traffic offences        | —     | 0.2   | —     | 0.3   | —     | —     | —     | —      | 0.1   | 8      |
| Other offences                | 0.3   | 0.1   | 0.6   | 0.6   | 1.3   | —     | —     | —      | 0.5   | 70     |
| Offences in custody           | —     | —     | —     | 0.1   | —     | —     | —     | —      | —     | 2      |
| Total                         | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | —      | 100.0 | 15 429 |

(a) The most serious offence is the offence with the longest sentence a prisoner has received. Where sentences are equal, or the longest sentence cannot be determined, the most serious offence is the offence with the lowest Australian National Classification of Offences (ANCO) code. (b) Prisoners sentenced to full-time custody in the Australian Capital Territory are held in New South Wales prisons and are included in the New South Wales figures. (c) Property damage also includes Environmental Offences.

(d) Government security also includes Justice Procedures.

Source: *Prisoners in Australia, 1995* — A report prepared for the Corrective Services Ministers' Council by the National Correctional Services Statistics Unit, ABS.

In New South Wales, 13% of prisoners were in prison with drug dealing or trafficking offences as their most serious offence, compared to the Northern Territory where less than 1% of prisoners fell into this category.

### Indigenous prisoners

To measure Indigenous imprisonment in Australia three different indices are used: the number of Indigenous prisoners; the number as a proportion of the adult Indigenous population (rate per 100,000 adult Indigenous population); and the comparison (ratio) of Indigenous to non-Indigenous rates of imprisonment. Imprisonment rates per 100,000 adult Indigenous population enable the comparison

of Indigenous imprisonment across the States and Territories, while the ratio indicates the extent to which the imprisonment rates of Indigenous persons exceed the imprisonment rates of non-Indigenous persons.

As shown in table 11.25, in March 1997 the number of Indigenous persons in prison in Australia was 3,223. The national Indigenous imprisonment rate for the quarter was 1,822 per 100,000 adult Indigenous population, and the ratio of Indigenous to non-Indigenous rates of imprisonment was around 18:1, meaning that the national rate of Indigenous imprisonment was 18 times greater than the rate of non-Indigenous imprisonment.

**11.25 INDIGENOUS IMPRISONMENT, March 1997**

|          | NSW(a)  | Vic.    | Qld     | SA      | WA      | Tas.  | NT      | ACT(a) | Aust.          |
|----------|---------|---------|---------|---------|---------|-------|---------|--------|----------------|
| Number   | 934.0   | 121.0   | 807.0   | 223.0   | 726.0   | 23.0  | 388.0   | 11.0   | <b>3 233.0</b> |
| Rate(b)  | 1 992.1 | 1 042.1 | 1 731.8 | 2 019.7 | 2 674.0 | 391.6 | 1 429.4 | 985.7  | <b>1 822.3</b> |
| Ratio(c) | 17.7    | 15.6    | 16.0    | 17.4    | 23.6    | 5.6   | 8.4     | 15.9   | <b>18.4</b>    |

(a) The number of Indigenous prisoners sentenced in the Australian Capital Territory and held in New South Wales prisons has been subtracted from the New South Wales figures and added to the Australian Capital Territory remand figures to provide total figures for the Australian Capital Territory. (b) Rate of Indigenous prisoners per 100,000 adult Indigenous population. (c) Ratio of Indigenous to non-Indigenous rates of imprisonment.

Source: *National Correctional Statistics: Prisons, March Quarter 1997* — A report prepared for the Corrective Services Ministers' Council by the National Correctional Services Statistics Unit, ABS.

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# Violence against women

## Introduction

Safety from physical attack, harassment or other forms of aggression or abuse is central to a person’s sense of well-being and is closely associated with fundamental notions of human rights. Physical injury and psychological trauma from attempted, threatened or actual incidents of violence can have major consequences for the lives of victims and can generate a substantial burden on families and the broader community in providing support for victims. It is for these reasons that an understanding of the nature and extent of violence and of means for minimising violent behaviours are issues of major public concern.

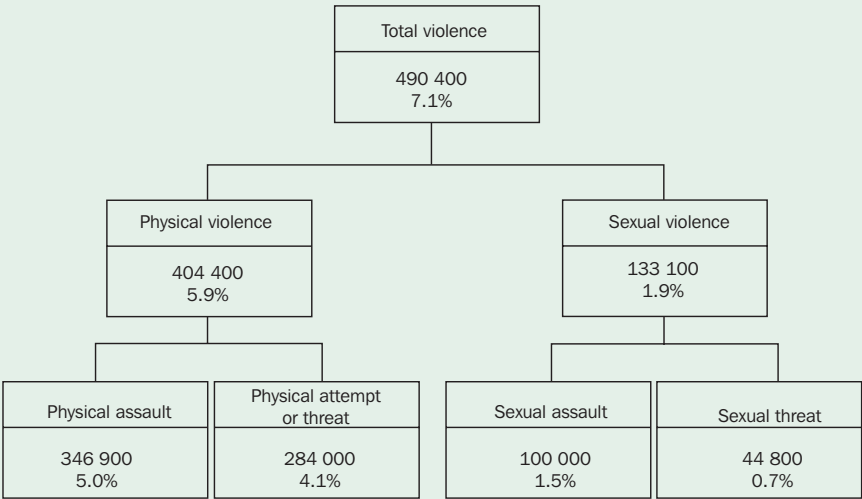
Violence in society takes many forms. Men, women and children can all be victims, as well as perpetrators of violence. In recent years violence against women has been a particular concern of governments, community groups and women themselves.

The 1996 Women’s Safety Survey measured the incidences of physical and sexual violence against women over the 12 months of 1996. The following definitions were used in the Women’s Safety Survey:

- Violence is any incident involving the occurrence, attempt or threat of either physical or sexual assault which occurred since the age of 15.
- Physical assault is use of physical force with the intent to harm or frighten a woman.
- Sexual assault is any act of a sexual nature carried out against a woman’s will through the use of physical force, intimidation or coercion, or any attempts to do this.
- Threats are included only if a woman believes they are able and likely to be carried out.

These definitions are based on actions which would be considered as criminal offences under State and Territory criminal law.

S3.1 WOMEN WHO EXPERIENCED VIOLENCE(a) DURING THE LAST 12 MONTHS, 1996



(a) A woman could have experienced both physical and sexual violence, as well as both assault and threat. The components when added may therefore be larger than the total.

Source: Women’s Safety, Australia (4128.0).

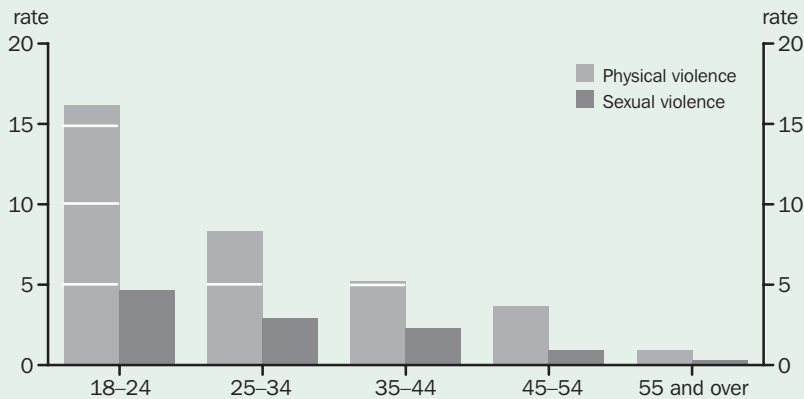
Main findings

During the 12 months prior to the survey 7% of women experienced an incident of violence. Although small in percentage terms, this corresponds to a sizeable number of women, 490,400 (table S3.1). Women were more likely to experience physical violence than sexual violence (6% compared with 2%). However, 47,100 women had experienced physical and sexual violence on separate occasions. Women were nearly four times more likely to experience violence by a man than by a woman. 22% of women who experienced violence (109,100) reported incidents by more than one perpetrator in the previous 12 months.

Age

Younger women are more at risk of violence than older women. 19% of women aged 18–24 had experienced one or more incidents of violence in the previous 12 month period compared to 7% of women aged 35–44 and 1.2% of women aged 55 and over (see graph S3.2). The same pattern is evident for both physical and sexual violence. However, the decline with age is greater for physical violence than for sexual violence. Women who experienced violence by women tended on average to be younger than those who experienced violence by men. 46% of women reporting violence by women were aged 18–24 years compared to 36% of those reporting violence by men.

S3.2 WOMEN'S EXPERIENCE OF VIOLENCE DURING THE LAST 12 MONTHS, 1996



(a) Per 100 women in the age group.  
Source: Women's Safety, Australia (4128.0).

Physical violence

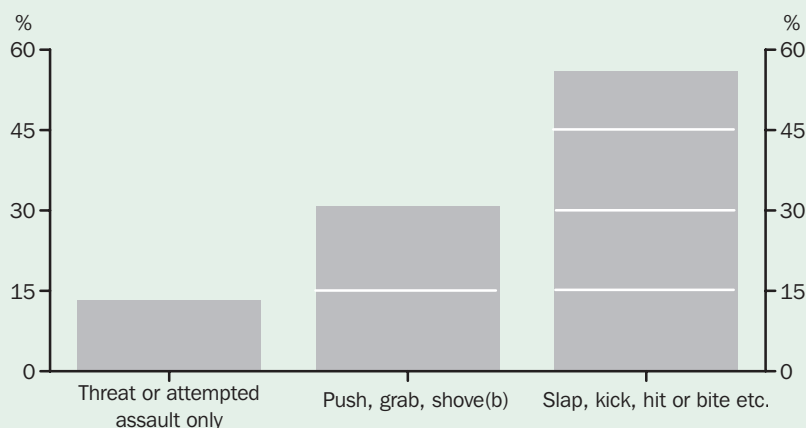
Incidents of physical violence may involve one or more actions on the part of the perpetrator. The Women's Safety Survey classified the nature of physical violence on the basis of these actions in the last incident.

As graph S3.3 shows, of the 338,700 women who experienced physical violence by a man in the previous 12 month period, 13% experienced a threat or attempt only and a further 31% were pushed, grabbed or shoved, whether or not in conjunction with threats or attempts. The remaining incidents (56%) involved more serious actions such as hitting, slapping,

punching or beating, which may also have been in conjunction with pushing, grabbing, shoving or threatening.

The severity of violence can also be assessed from injuries sustained. Of those women who had been assaulted by a man in the previous 12 month period, 48% who were physically assaulted, and 22% who were sexually assaulted, were injured in the last incident. The most common injuries were bruises, cuts and scratches. While a sexual assault had to involve force, this may have been physical force or coercion, including the threat of physical harm to the woman or her children.

S3.3 PHYSICAL VIOLENCE BY A MAN(a), 1996



(a) Refers to last incident during the last 12 months. (b) Alone or in combination with threat or attempt.

Source: Women's Safety, Australia (4128.0).

### Marital status and relationship to perpetrator

Perhaps because of their different ages and life styles, women who were married or in a de facto relationship were less likely to experience (or report experiencing) violence by a man than those who were not married. 4% of women with a current partner experienced violence by either their partner or another man in the previous 12-month period, compared to 10% of women who were not married (see table S3.4). This pattern was observed for both physical and sexual violence.

de facto relationship were more likely to have experienced violence by their partner than by another man known to them or by a stranger. Among women who were not married, those most at risk of violence were women who had a previous partner. Of these women 5% experienced violence from their previous partner in the previous 12 month period.

Women who were not married were also at least three times more likely to have experienced physical or sexual violence from strangers and men known to them, than women with a current partner.

S3.4 VIOLENCE BY A MAN(a), 1996

|                             | Married/de facto | Not married | Total      |
|-----------------------------|------------------|-------------|------------|
| Relationship to perpetrator | rate(b)          | rate(b)     | rate(b)    |
| Current partner             | 2.6              | . .         | 2.6        |
| Previous partner            | * *              | 4.8         | 3.3        |
| Other known man             | 1.0              | 3.4         | 1.9        |
| Stranger                    | 0.7              | 3.0         | 1.5        |
| <b>Total(c)</b>             | <b>4.0</b>       | <b>10.0</b> | <b>6.2</b> |

(a) During the last 12 months. (b) Rate per 100 women in the relevant population. (c) If a woman experienced violence by more than one male perpetrator, she was only counted once in the total.

Source: Women's Safety, Australia (4128.0).

The likelihood of a woman experiencing violence, by someone she knows or a stranger, also differed according to whether or not she had a partner. Women who were married or in a

### Partner violence

Of women who have ever been married or in a de facto relationship, 23% experienced violence by a partner at some time during or following the relationship. Women were considerably more likely to have experienced violence in a past than a current relationship (42% compared to 8%). Three quarters of the women who experienced violence by their current partner reported that it had occurred only once or rarely (262,700) compared to approximately 40% of women who had experienced violence from a previous partner. Notwithstanding this, of women who reported violence from their current partner at some stage in the relationship, 12% (41,700) said that they currently lived in fear.

In addition to information about the occurrence of violence, the survey also collected information about emotional abuse a woman may have experienced by her partner. Of all

women in a current relationship, 9% reported some form of emotional abuse, which was defined as manipulation, isolation or intimidation. Women who experienced violence from their partner were significantly more likely to experience emotional abuse than those who had not (59% compared to 4%).

Pregnancy is a time when women may be vulnerable to abuse. Of those women who experienced violence by a previous partner, 701,200 had been pregnant at some time during their relationship. While 42% of these women experienced violence during the pregnancy (292,100), 20% experienced violence for the first time while they were pregnant.

There were 483,700 women who separated from a previous partner who had been violent to them, and who subsequently returned to that partner. During the time they were separated, 35% of these women experienced violence by their partner. Half of the women who experienced violence by a previous partner finally ended their relationship because of the violence they experienced or because of threats against their children.

### **Children witnessing violence**

Violence which occurs between partners in a home may affect the children who also live in the home. 61% (211,600) of women who experienced violence by a current partner reported that they had children in their care at some time during the relationship, and 38% (132,400) said that these children had witnessed the violence. 46% of women who experienced violence by a previous partner said that children in their care had witnessed the violence.

### **Actions taken in response to violence**

There is a range of actions that a woman can take as a result of an incident of violence, including: contacting the police; seeking advice or support from a professional, such as a doctor, counsellor or minister of religion; contacting a service provider for crisis, legal or financial assistance; or speaking to other people, such as family and friends.

Overwhelmingly, the main action taken after experiencing an assault by a man was talking to other people, particularly family and friends. 79% of women who were physically assaulted by

a man since the age of 15, and 72% who were sexually assaulted, discussed their last experience with family, friends or others (see graph S3.5). Women were more likely to contact a crisis service about sexual assault than physical assault (11% compared to 6%) although the rate of contact was low for both. The pattern was similar among women who experienced incidents of physical and sexual assault in the previous 12 month period.

### **Reporting to the police**

Of women who experienced a physical assault by a man in the previous 12 month period, 54,400 (19%) said they reported the last incident to the police, as did 14,700 (15%) of women who were sexually assaulted.

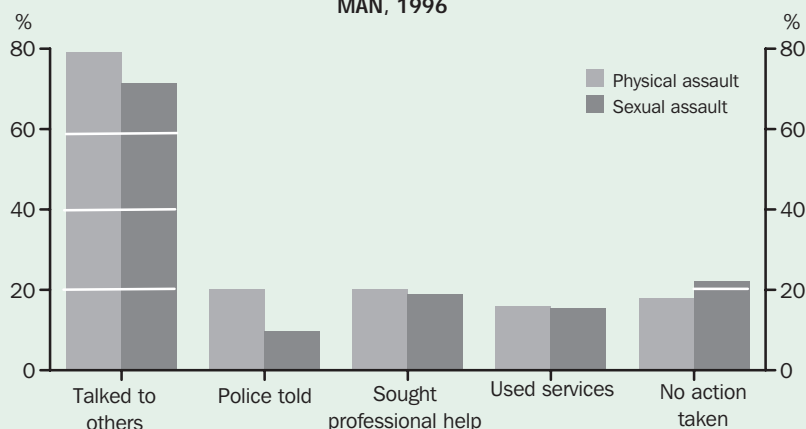
One-fifth of women who had experienced an incident of physical assault by a man since the age of 15 had reported the last incident to the police (302,300), as did one-tenth of women who were sexually assaulted (75,500) (see table S3.6). A small proportion of incidents were reported to the police by somebody else.

Women were more likely to report incidents that were perpetrated by a stranger than by somebody they knew. Of women whose last incident of assault was by a stranger, 35% who were physically assaulted and 25% who were sexually assaulted reported the incident to the police. Women who were physically assaulted by a current partner were least likely to have reported the incident (5%).

Women were more likely to report incidents in which they were injured. Of women who were injured in the last incident of physical assault experienced since the age of 15, 29% reported the incident to the police compared to 10% who were not injured. The pattern was similar for incidents of sexual assault.

About 40% of women who experienced a physical assault by a man since the age of 15, said that the main reason for not telling the police was because they had dealt with the incident themselves. Almost one-quarter of women who were physically assaulted and 14% of those sexually assaulted did not contact the police because they did not consider it a serious offence. Of those who were sexually assaulted, 12% said they did not report the last incident to the police because they were ashamed or embarrassed.

**S3.5 ACTIONS TAKEN BY WOMEN AFTER EXPERIENCING ASSAULT(a) BY A MAN, 1996**



(a) Refers to last incident experienced since the age of 15 years. Excludes women whose last incident occurred more than 20 years ago.

Source: Women's Safety, Australia (4128.0).

Once an incident is reported to the police there is the possibility that the perpetrator will be charged and consequently appear in court. 28% of incidents of physical assault reported to the police and 22% of incidents of sexual assault resulted in the perpetrator being charged.

Of women who reported in the survey that they had experienced an incident of violence by a man since the age of 15, 18% (267,100) who were physically assaulted and 22% (170,800) who were sexually assaulted had never told anybody about the last incident, prior to the survey.

**S3.6 WOMEN WHO REPORTED THE LAST INCIDENT OF ASSAULT(a) BY A MAN TO THE POLICE, 1996**

| Relationship to perpetrator | Physical assault |             | Sexual assault |            |
|-----------------------------|------------------|-------------|----------------|------------|
|                             | '000             | rate(b)     | '000           | rate(b)    |
| Current partner             | *12.9            | *5.1        | * *            | * *        |
| Previous partner            | 163.9            | 24.2        | 29.4           | 16.6       |
| Boyfriend/date              | *14.7            | *9.5        | *7.7           | *3.6       |
| Other known man             | 51.1             | 21.3        | *17.5          | *6.7       |
| Stranger                    | 59.7             | 34.7        | *20.9          | *24.5      |
| <b>Total(c)</b>             | <b>302.3</b>     | <b>20.2</b> | <b>75.5</b>    | <b>9.8</b> |

(a) Since the age of 15 years. Excludes women whose last incident occurred more than 20 years ago. (b) Rate per 100 women who experienced assault by the perpetrator group. (c) If a woman experienced assault by more than one male perpetrator, she was only counted once in the total.

Source: Women's Safety, Australia (4128.0).



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## Introduction

Cultural and recreational activities are essential to a shared sense of quality of life, and take many forms. At a national level these forms range across cultural heritage, creative and performing arts, music, literature, film and video, libraries, radio and television, leisure, sports and recreation.

This chapter reviews a range of cultural and recreational activities which Australians undertake, and provides a statistical summary (where available) for those activities.

## Cultural and natural heritage

Australia's heritage is drawn from its cultural and natural environments.

Cultural heritage includes many different types of Indigenous sites, such as ceremonial grounds and rock art galleries, and historic places of significance, such as old towns and residential and commercial buildings, shipwrecks and streetscapes.

Natural heritage includes places which are of scientific, archaeological, aesthetic and ecological importance. It also can include geological features and landscapes. Extensive areas of coastline, forests, wetlands and desert are included in national parks, nature reserves and wilderness areas. Many smaller sites are important habitats for native flora and fauna, enabling the conservation of threatened species. Many natural places are significant to Indigenous communities for cultural reasons.

Conservation of heritage places involves identifying them, surveying their values, classifying and managing them. These functions are shared between all levels of government and their statutory authorities, with assistance from academic and professional bodies, individuals and community conservation organisations such as the National Trusts and conservation councils in each State and Territory.

The Commonwealth Government works in partnership with the community and with State and Territory Governments. It undertakes heritage activities on its own account where the implications of these actions go beyond State or local boundaries. Examples of this include the nomination of sites for World Heritage listing,

the protection of Aboriginal heritage, and advice about proposals which might affect places entered in the Register of the National Estate — Australia's national Heritage list.

## National Estate

The term 'the National Estate' was coined by William Clough Ellis, a British architect in the 1940s. It was introduced into Australia when the Federal Government set up a Commission of Inquiry into the National Estate, headed by Hon. Mr Justice R.M. Hope. The inquiry aimed to 'preserve and enhance the quality of the National Estate'. Following the recommendations of this inquiry, the Australian Heritage Commission Act was passed in 1975 with the support of all political parties.

'The National Estate' is defined in the legislation as:

"... those places, being components of the natural environment of Australia, or the cultural environment of Australia, that have aesthetic, historic, scientific or social significance or other special value for future generations as well as for the present community."

Both publicly and privately owned places form part of the National Estate. It encompasses places which are important to local communities, as well as those which are of regional or State significance. The National Estate also includes places which have national or international significance. Broad stretches of coastline, desert, forest and national parks, as well as isolated geological monuments and small areas which might provide habitats for endangered plant or animal species, are part of the National Estate. It can cover whole villages and suburbs, streetscapes, single mansions, cattlemen's huts, railway yards and other reminders of the evolution of Australia's society and economy. Places of Aboriginal or Torres Strait Islander significance such as rock engravings, galleries of rock art, fish traps, carved trees, meeting places, ceremonial sites, and reminders of early European settlement such as mission stations, are part of Australia's National Estate.

The Australian Heritage Commission has a statutory obligation to identify the National Estate and has established the Register of the National Estate to place on public record Aboriginal, Historic and Natural places to ensure that they are appropriately managed and conserved.

## 12.1 PLACES ON THE REGISTER OF THE NATIONAL ESTATE, By Number and Type

| State/Territory                 | Indigenous places |            | Historic places |              | Natural places |              | Total         |               |
|---------------------------------|-------------------|------------|-----------------|--------------|----------------|--------------|---------------|---------------|
|                                 | 1995-96           | 1996-97    | 1995-96         | 1996-97      | 1995-96        | 1996-97      | 1995-96       | 1996-97       |
| New South Wales                 | 213               | 214        | 2 844           | 2 857        | 417            | 432          | 3 474         | 3 503         |
| Victoria                        | 103               | 104        | 2 193           | 2 240        | 200            | 205          | 2 496         | 2 549         |
| Queensland                      | 144               | 146        | 705             | 721          | 261            | 266          | 1 110         | 1 133         |
| Western Australia               | 74                | 74         | 879             | 885          | 229            | 232          | 1 182         | 1 191         |
| South Australia                 | 143               | 143        | 745             | 851          | 361            | 372          | 1 249         | 1 366         |
| Tasmania                        | 63                | 65         | 1 153           | 1 176        | 227            | 232          | 1 443         | 1 473         |
| Northern Territory              | 86                | 88         | 105             | 108          | 52             | 51           | 243           | 247           |
| Australian Capital Territory(a) | 10                | 25         | 137             | 138          | 28             | 28           | 175           | 191           |
| External Territories            | —                 | —          | 15              | 16           | 16             | 16           | 31            | 32            |
| <b>Total</b>                    | <b>836</b>        | <b>859</b> | <b>8 776</b>    | <b>8 992</b> | <b>1 791</b>   | <b>1 834</b> | <b>11 403</b> | <b>11 685</b> |

(a) Includes Jervis Bay.

Source: Australian Heritage Commission.

Places are sometimes lost to the National Estate because of natural events such as flooding and bushfires. Some are also lost through redevelopment or neglect. There are no legal constraints on the way State and local governments, other organisations or private citizens manage places in the Register. The Commonwealth Government is the only body whose actions are legally constrained as a result of entering a place in the Register.

During 1996-97, the number of places in the Register of the National Estate increased by a net 282 to 11,685. This compared with a net increase of 372 in 1995-96. Details by State and type, and comparisons between 1995-96 and 1996-97, are shown in table 12.1.

More comprehensive statistics on the types of places on the National Estate can be found in the annual reports of the Australian Heritage Commission.

### Natural environment

The natural environment includes conservation areas and areas used for outdoor recreation (except sport), such as national and State parks or reserves, other natural areas on the National Estate or equivalent State or Territory government registers, tourist caves, and picnic and recreation (not sporting) grounds. Management of the natural environment ensures the preservation of local flora and fauna,

controls and excludes the development of the area for fishing, forestry, mining or agriculture and, where appropriate, facilitates access by the general public.

### National parks

National parks are established by both Commonwealth and State/Territory legislatures. There is no coordinating legislation, although all governments participate in national forums and cooperate in joint programs, such as the National Reserves System, to achieve a common purpose. The *National Parks and Wildlife Conservation Act 1975* is Commonwealth enabling legislation which provides for the establishment of parks and reserves on land owned or leased by the Commonwealth, in Commonwealth waters and on Aboriginal land leased to the Commonwealth.

### Use of national parks

Table 12.2 gives the numbers and profile of the people visiting national parks in Australia. These findings are derived from an ABS household survey, the Population Survey Monitor, over four quarters in 1996-97, and show that a total of 3.34 million people (or 25.3% of the Australian population aged 18 and over) went to a national park in the three month period preceding conduct of the survey. Of these, 1.73 million were males and 1.61 million were females.

**12.2 VISITORS TO NATIONAL PARKS, 1996–97**

| Attendees              | '000         |
|------------------------|--------------|
| Sex                    |              |
| Male                   | 1 725        |
| Female                 | 1 613        |
| <b>Total attendees</b> | <b>3 339</b> |
| Age                    |              |
| 18–24 years            | 520          |
| 25–34 years            | 846          |
| 35–44 years            | 920          |
| 45–54 years            | 536          |
| 55–64 years            | 281          |
| 65 years and over      | 235          |
| Birthplace             |              |
| Australian born        | 2 528        |
| Overseas born          | 810          |
| Employment status      |              |
| Employed full-time     | 1 700        |
| Employed part-time     | 654          |
| Unemployed             | 198          |
| Not in labour force    | 786          |

Source: *Population Survey Monitor*, 1996–97.

## Museums and art museums

Museums are defined by the International Council of Museums as institutions, generally housed in one or more buildings, primarily engaged in the collection, acquisition, conservation and exhibition of the material evidence of people, their culture and environment, for the purpose of education and enjoyment by the general public and/or specialists. Conceptually, museums include art museums and historical theme parks, such as Sovereign Hill, but exclude commercial art galleries as they are regarded as retail outlets. However, in the discussion below and in tables 12.3 and 12.4, museums and art museums have been treated as separate entities, and there is no double counting between them.

While there is no centralised system of administration for Australian museums and art museums, there is a central professional organisation called Museums Australia, based in Melbourne. This organisation is associated with the International Council of Museums. In addition to providing professional advice for its members, Museums Australia provides information about member institutions, including collections and policies. During 1996, the National Museum of Australia commenced development of a national Internet access program called AMIS. When completed, AMIS will offer access to information about cultural, historic and scientific heritage items in every museum in the country.

In many cases, State museums and art museums were established many years before their national counterparts. As a result, a number of notable national collections are housed in museums operated by or through State Governments, rather than being housed in the national institutions. The main national museums and art museums are the National Museum of Australia, the Australian National Maritime Museum, the Australian War Memorial museum, the National Science and Technology Centre (Questacon), the National Gallery of Australia, and the National Portrait Gallery at Old Parliament House in Canberra (operated by the National Library). The last major national survey of museums, conducted in 1993, counted 1,765 museums and art museums operating in Australia at that time.

## Museum and art museum attendance

A Survey of Attendance at Selected Cultural Venues was conducted by the ABS in March 1995. It revealed that 3.9 million people, or 27.8% of the Australian population aged 15 and over, had visited a museum at least once in the previous 12 months. A total of 3.1 million (or 22.3% of the Australian population aged 15 and over) had visited an art museum.

12.3 ATTENDANCE AT MUSEUMS AND ART MUSEUMS, 1995

|                     | Museums      | Art museums  |
|---------------------|--------------|--------------|
|                     | '000         | '000         |
| Sex                 |              |              |
| Male                | 1 867        | 1 318        |
| Female              | 2 039        | 1 817        |
| <b>Total</b>        | <b>3 910</b> | <b>3 134</b> |
| Age                 |              |              |
| 15–24 years         | 767          | 628          |
| 25–34 years         | 829          | 598          |
| 35–44 years         | 939          | 643          |
| 45–54 years         | 646          | 591          |
| 55–64 years         | 384          | 350          |
| 65 years and over   | 342          | 325          |
| Birthplace          |              |              |
| Australian born     | 2 951        | 2 351        |
| Overseas born       | 955          | 783          |
| Employment status   |              |              |
| Employed            | 2 604        | 2 060        |
| Unemployed          | 224          | 168          |
| Not in labour force | 1 077        | 907          |

Source: *Attendance at Selected Cultural Venues, March 1995 (4114.0)*.

In 1995, Museums Australia conducted a survey of 283 larger museums with paid staff, which found that the total operating expenditure of these institutions was \$351.0m, and total income \$341.9m (table 12.4).

12.4 INCOME AND EXPENDITURE OF MUSEUMS AND ART MUSEUMS, 1994–95

|                       | Units | Museums | Art museums | Total        |
|-----------------------|-------|---------|-------------|--------------|
| Number                | no.   | 175     | 108         | <b>283</b>   |
| Income                | \$m   | 237.5   | 104.4       | <b>341.9</b> |
| Operating expenditure | \$m   | 234.7   | 116.3       | <b>351.0</b> |
| Capital expenditure   | \$m   | 33.7    | 23.8        | <b>57.5</b>  |

Source: *Museums Australia Inc., Museums 1995 Survey*.

Botanic gardens, zoological and marine parks

Botanic gardens

Botanic gardens and arboreta (tree collections) are scientific and cultural institutions established to collect, study, exchange and display plants for research and for the education and enjoyment of

the public. Some botanic gardens augment the living botanical displays with a herbarium (a scientific collection of dried preserved plant specimens used for the accurate classification and identification of plant and plant material and for taxonomic studies), and some botanic gardens (those in Adelaide, Melbourne and Sydney) use annexes to extend the range of cultivated plant displays.

There are significant botanic gardens in each capital city, managed by the State or Territory Governments (except for Brisbane, which is municipal, and Canberra, which is Commonwealth). The Commonwealth also manages the Booderee Botanic Gardens at Jervis Bay on behalf of the traditional Aboriginal owners of the land, the Wreck Bay Aboriginal Community Council, under arrangements set in place since December 1995. There are a number of smaller regional botanic gardens (about 100), many of which have been created in recent years, often under the auspices of local government.

The Australian National Botanic Gardens occupies a 90 hectare site on the lower slopes of Black Mountain in Canberra. It contains the national collection and one of Australia's most comprehensive displays of living native plants. Officially opened in 1970, in September 1991 it was proclaimed a reserve under the *National Parks and Wildlife Conservation Act 1975*, which provided legal protection for the collections. The Australian National Botanic Gardens maintains 85,000 plants, representing more than 6,000 taxa — constituting about one-third of the vascular plants recorded for Australia. It receives about 330,000 visitors each year, with peaks in October for the spring flowering and January for the holiday tourist season. It is on the Register of the National Estate in recognition of its importance as a research and teaching-based botanic garden established to display and interpret Australian flora. The Australian National Herbarium, containing the voucher specimens for the living plants in the Gardens, is managed jointly with CSIRO Plant Industry as part of the Centre for Plant Biodiversity Research. It currently houses about one million herbarium specimens.

In 1993 the Australian National Botanic Gardens was the first botanic gardens and herbarium to make its information on Australian plants available on the Internet.

The Council of Heads of Australian Botanic Gardens, which comprises the heads of the

principal Commonwealth, State and Territory botanic gardens, meets annually to discuss significant issues of gardens management.

The other national consultative body in this field is the Council of Heads of Australian Herbaria, which comprises the heads of the major Australian herbaria, with observers representing smaller and regional herbaria. It meets annually to discuss collections management and curation, and significant issues of botanical activity in Australia.

Attendance at botanic gardens

The Survey of Attendance at Selected Cultural Venues showed that over 5.4 million people (or 38.5% of the Australian population aged 15 and over) attended a botanic garden at least once in the 12 months ended 31 March 1995.

| 12.5 ATTENDANCE AT BOTANIC GARDENS,<br>Persons Aged 15 and Over — 1995 |       |
|------------------------------------------------------------------------|-------|
| Attendees                                                              | '000  |
| Sex                                                                    |       |
| Male                                                                   | 2 459 |
| Female                                                                 | 2 951 |
| Total                                                                  | 5 411 |
| Age                                                                    |       |
| 15–24 years                                                            | 1 123 |
| 25–34 years                                                            | 1 167 |
| 35–44 years                                                            | 1 125 |
| 45–54 years                                                            | 861   |
| 55–64 years                                                            | 539   |
| 65 years and over                                                      | 596   |
| Birthplace                                                             |       |
| Australian born                                                        | 3 868 |
| Overseas born                                                          | 1 542 |
| Employment status                                                      |       |
| Employed                                                               | 3 453 |
| Unemployed                                                             | 316   |
| Not in labour force                                                    | 1 642 |

Source: Attendance at Selected Cultural Venues, March 1995 (4114.0).

Zoological and marine parks

Zoological parks and marine parks (i.e. animal, fauna, bird life, reptile parks; aquaria; aviaries; butterfly houses; dolphinariums) are primarily engaged in the breeding, preservation, study and display of native and/or exotic fauna in captivity, enclosures or natural environments, so as to be accessible to the general public on payment of an entrance fee. The term *marine parks* does

not include declared marine parks such as the Great Barrier Marine Park, which have been created for conservation purposes only, and are treated for statistical purposes as part of the natural environment.

Melbourne was the location of the first zoo in Australia, Melbourne Zoo being founded in 1857. There are now zoos and wildlife sanctuaries throughout Australia. As well as the four traditional zoos in Sydney, Melbourne, Adelaide and Perth, there are numerous wildlife parks and sanctuaries, some associated with urban zoos and others privately owned. Some of the better known zoological parks and sanctuaries are Healesville Sanctuary (60 km from Melbourne), the Western Plains Zoo (Dubbo), Victoria Open Range Zoo at Werribee (a Melbourne suburb), The Territory Wildlife Park (Darwin), Monarto Zoological Park (70 km from Adelaide) and Lone Pine Koala Sanctuary (Brisbane). The best known Marine Park in Australia is Sea World at Surfers Paradise, Queensland.

The Australasian Regional Association of Zoological Parks and Aquaria (ARAZPA) was formally established in 1990 at Auckland Zoo, New Zealand, and was incorporated in Australia in 1991. The Australian regional office is located in New South Wales. ARAZPA is administered by a Board of Management with committees addressing the regions' species management program, ethics, budget and policy review, and animal husbandry. While the association has an increasing number of individual members, there are currently 36 full institutional members, which are zoological parks and aquaria. A key purpose of the association is to encourage the development of zoos and aquaria as conservation and education resources, and to promote zoological parks and aquaria as cultural institutions of high standing.

The 1995 Survey of Attendance at Selected Cultural Venues shows that over 4.9 million people (or 35.3% of the Australian population aged 15 and over) visited an animal or marine park during the 12 months ended March 1995 (table 12.6). Of these, 3.1 million (or 22.2% of the Australian population aged 15 and over) visited a zoo at least once during the year.

**12.6 ATTENDANCE AT ANIMAL AND MARINE PARKS, Persons Aged 15 and Over — 1995**

| Attendees           | '000         |
|---------------------|--------------|
| Sex                 |              |
| Male                | 2 270        |
| Female              | 2 696        |
| <b>Total</b>        | <b>4 966</b> |
| Age                 |              |
| 15–24 years         | 1 113        |
| 25–34 years         | 1 312        |
| 35–44 years         | 1 132        |
| 45–54 years         | 674          |
| 55–64 years         | 402          |
| 65 years and over   | 333          |
| Birthplace          |              |
| Australian born     | 3 632        |
| Overseas born       | 1 334        |
| Employment status   |              |
| Employed            | 3 315        |
| Unemployed          | 297          |
| Not in labour force | 1 354        |

Source: *Attendance at Selected Cultural Venues, March 1995 (4114.0)*.

## Libraries and archives

### Libraries

The National Culture–Leisure Industry Statistical Framework divides libraries into five types: the National and State Libraries, Public Libraries, Special Libraries, Libraries in Higher Education Establishments and School Libraries. For further details, see *Year Book Australia, 1996*.

In 1960 the National Library of Australia Act gave the statutory title of National Library to the Commonwealth National Library. Today the National Library of Australia provides national leadership and coordination in this field. It is responsible for developing and maintaining the collection of printed material published in Australia, acquired under the provisions of the *Copyright Act 1968* and, as the national bibliographic centre, it compiles and publishes the Australian National Bibliography.

The Australian Bibliographic Network (ABN), established in 1981, is a computer network among Australian libraries for resource sharing.

The National Document and Information Service project (NDIS), a cooperative venture with New Zealand, will provide technology-based information services of recorded knowledge

held in libraries and databases in Australia, New Zealand and other parts of the world. In 1997, recognising the changes and new products available in the information technology marketplace since the NDIS project was conceived, the Library decided to tender for ABN replacement software to meet its medium term needs in networked services.

Continued development of the Library's World Wide Web information server has resulted in increasing levels of remote use of this service, and an average of 15,000 library files are transmitted each day. Digitised images of the Library's pictorial collection are available over the Internet from the Images 1 database. Easy access via the Internet to the Library's catalogue of nearly 2.3 million records has made its collections more accessible and easier to use.

Meanwhile the National Library has worked on the technical issues of preservation and access to Australian electronic publications, and collaborates internationally on the development of Internet data standards. The Library has continued to add to its Australian and overseas print collections. The overseas collecting rationalisation carried out over the previous years is now largely complete — print collection has been stabilised at a sustainable level for the foreseeable future.

One consequence of the Library's ongoing monitoring and evaluation of the effectiveness and use of its services has been the transfer of the operations of the Australian International Standard Book Numbering Agency to the private sector. This brings arrangements into line with those in similar agencies in the United Kingdom and the United States of America, and was undertaken on the premise that the same level of service should apply to future operations.

First established in 1937 as the Australian Institute of Librarians, the Australian Library and Information Association (ALIA) is a major national organisation devoted to promoting quality library and information services and professionalism of library and information personnel. In 1996 ALIA launched its Aboriginal and Torres Strait Islander recruitment and career development strategy. The Association's national headquarters are in Canberra, with a Branch in each State and Territory.

Established in 1988, the Australian Council of Libraries and Information Services (ACLIS) is the national, cross-sectorial libraries body which deals exclusively with the needs of institutions



and supports research and development relating to Australian libraries. Its National Council is located in Canberra, with committees in each State and Territory.

In June 1997, the ACLIS National Council and ALIA General Council agreed to work together to create one new body to represent the Australian library and information services sector. The new organisation will be based on the ALIA infrastructure with ACLIS abolishing itself on 30 June 1998, and there is a target date for the establishment of the new body by no later than 1 January 2000.

### Public Lending Right

Public Lending Right (PLR) is a Commonwealth Government program administered by the Department of Communications and the Arts which makes payments to eligible Australian book creators and publishers in recognition that income is lost from the free multiple use of their books in public lending libraries. Australia is one of 15 countries that operate a Public Lending Right program.

The *Public Lending Right Act 1985* provides the legislative framework for the PLR Scheme. A Public Lending Right Committee is appointed by the Minister to administer the Scheme, and the Act provides for the gazettal of a PLR Scheme by the Minister.

Payment is determined by the number of copies of eligible books that are held in public lending libraries. This information is obtained from an annual survey of the books held in a sample of public lending libraries selected by the Australian Bureau of Statistics. If 50 or more copies of an eligible book are estimated to be held in Australian public lending libraries, a payment may be made.

Books are surveyed annually for three consecutive financial years following their year of publication. If, in the third year, a book is still held in sufficient numbers in public lending libraries, it will be resurveyed once every three years. Books scoring less than 50 copies in the third or subsequent surveys are dropped from the survey cycle.

In 1996 the number of books in public lending libraries was 30.4 million.

Almost 7,600 book creators and their publishers received PLR payments totalling more than \$4.7 million for the 1996–97 program. The PLR rates of payment under the current PLR Scheme

are \$1.19 per copy of each eligible book for creators and \$0.297 per copy of each eligible book for publishers.

### Library attendance

The 1995 Survey of Attendance at Selected Cultural Venues provides data on persons aged 15 years and over who attended a national, State or local library at least once over the 12 month survey period. Table 12.7 shows that more than 5.4 million persons (or 38.4% of the Australian population aged 15 and over) attended one of these libraries at least once during the 12 months ended March 1995.

In June 1993, the Cultural Ministers Council established a national Libraries Working Group to advise on how Governments might best assist the State and public libraries in meeting the library, information and cultural needs of Australians.

**12.7 ATTENDANCE AT LIBRARIES(a), 1995**

|                     | '000         |
|---------------------|--------------|
| Sex                 |              |
| Male                | 2 231        |
| Female              | 3 172        |
| <b>Total</b>        | <b>5 403</b> |
| Age                 |              |
| 15–24 years         | 1 219        |
| 25–34 years         | 1 045        |
| 35–44 years         | 1 217        |
| 45–54 years         | 807          |
| 55–64 years         | 470          |
| 65 years and over   | 646          |
| Birthplace          |              |
| Australian born     | 3 983        |
| Overseas born       | 1 420        |
| Employment status   |              |
| Employed            | 3 168        |
| Unemployed          | 379          |
| Not in labour force | 1 857        |

(a) National, State or local library only.

Source: *Attendance at Selected Cultural Venues, March 1995 (4114.0)*.

### Reading habits and book buying

A household survey conducted in February 1995 by the Population Survey Monitor revealed that 87.9% of males and 82.4% of females aged 18 years and over had read a newspaper in the week prior to the survey, and 46.8% of males and 57.8% of females aged 18 years and over had

read a book in the week prior to the survey (table 12.8).

An ABS Survey of Aspects of Literacy in 1996, which measured the ability of people aged 15–74 years to use and understand everyday prose and documents (magazine articles, brochures, medicine labels, bus timetables etc.), found that 63.8% of people read newspapers or magazines daily, 33.2% read books daily and 11.1% used a public library at least weekly (table 12.9).

In all, about 2.6 million people were assessed as having very poor prose skills (Level 1 rating). Of these, 52.7% read newspapers or magazines daily, 21.4% read books daily and 6.3% used a public library at least once a week.

In contrast, 70.4% of the 2.3 million people with good/very good prose literacy (Level 4/5 rating) read newspapers or magazines daily, 47.0% read

books daily and 15.8% used a public library at least weekly. The proportion of people undertaking the latter two activities with the frequency indicated was more than twice as great for people with good/very good skills as it was for people with very poor skills.

See also the article summarising the results of the ABS survey in *Chapter 10, Education*.

The ABS Household Expenditure Survey provides extensive data on spending on the arts and on arts-related goods and services. A comparison of the total annual expenditure on books by all Australian households in 1988–89 and 1993–94 shows an increase of \$358m, with \$705m spent on books in 1988–89 and \$1,063m in 1993–94. Table 12.10 shows the annual averages of spending on books per person in 1993–94, by State and Territory.

## 12.8 READING HABITS, Persons Aged 18 and Over — 1995

|                 | Age (years) |       |       |       |       |             | Total |
|-----------------|-------------|-------|-------|-------|-------|-------------|-------|
|                 | 18–24       | 25–34 | 35–44 | 45–54 | 55–64 | 65 and over |       |
| Literature read | %           | %     | %     | %     | %     | %           | '000  |
| MALES           |             |       |       |       |       |             |       |
| Books           | 50.9        | 54.2  | 44.7  | 40.9  | 42.7  | 44.7        | 2 943 |
| Magazines       | 72.3        | 73.7  | 68.1  | 52.7  | 52.5  | 45.9        | 3 922 |
| Newspapers      | 85.5        | 88.4  | 88.1  | 87.4  | 94.8  | 84.4        | 5 531 |
| Journals        | *9.1        | 29.7  | 27.6  | 28.8  | 25.7  | 20.3        | 1 525 |
| Other           | *3.6        | 7.1   | 7.3   | *6.8  | *8.1  | *2.7        | 381   |
| None            | *2.4        | *0.2  | *2.8  | *6.3  | *1.0  | *8.0        | 209   |
| FEMALES         |             |       |       |       |       |             |       |
| Books           | 57.2        | 61.9  | 61.1  | 55.1  | 55.5  | 53.2        | 3 770 |
| Magazines       | 80.4        | 78.4  | 76.0  | 75.7  | 73.2  | 65.9        | 4 898 |
| Newspapers      | 79.9        | 84.1  | 83.4  | 85.8  | 81.1  | 78.4        | 5 370 |
| Journals        | *8.9        | 16.6  | 17.4  | 21.9  | 18.5  | 8.9         | 1 007 |
| Other           | *6.1        | *3.3  | *5.4  | *4.3  | *2.8  | *0.7        | 248   |
| None            | *1.8        | *2.0  | *0.7  | *3.7  | *3.1  | *4.5        | 163   |

Source: Population Survey Monitor, February 1995 (4103.0).

## 12.9 SELECTED LITERACY-RELATED ACTIVITIES IN DAILY LIFE, By Prose Scale Skill Level

| Skill level(a) | Read newspapers or magazines daily |             | Read books daily |             | Wrote material more than one page in length at least weekly |             | Used a public library at least weekly |             | Total persons   |
|----------------|------------------------------------|-------------|------------------|-------------|-------------------------------------------------------------|-------------|---------------------------------------|-------------|-----------------|
|                | '000                               | %           | '000             | %           | '000                                                        | %           | '000                                  | %           |                 |
| Level 1        | 1 373.1                            | 52.7        | 557.6            | 21.4        | 366.9                                                       | 14.1        | 164.4                                 | 6.3         | 2 607.4         |
| Level 2        | 2 310.0                            | 63.6        | 997.9            | 27.5        | 720.7                                                       | 19.8        | 323.4                                 | 8.9         | 3 631.9         |
| Level 3        | 3 124.6                            | 66.9        | 1 748.6          | 37.5        | 1 299.8                                                     | 27.8        | 612.4                                 | 13.1        | 4 668.9         |
| Level 4/5      | 1 627.1                            | 70.4        | 1 086.7          | 47.0        | 856.6                                                       | 37.0        | 366.0                                 | 15.8        | 2 312.5         |
| <b>Total</b>   | <b>8 434.8</b>                     | <b>63.8</b> | <b>4 390.7</b>   | <b>33.2</b> | <b>3 244.0</b>                                              | <b>24.5</b> | <b>1 466.3</b>                        | <b>11.1</b> | <b>13 220.8</b> |

(a) Level 1 — very poor, Level 2 — poor, Level 3 — average, Level 4/5 — good/very good.

Source: Aspects of Literacy: Assessed Skill Levels, Australia, 1996 (4228.0).



**12.10 ANNUAL AVERAGES OF SPENDING ON BOOKS PER PERSON, 1993–94**

|                              | Amount spent |
|------------------------------|--------------|
|                              | \$           |
| Australian Capital Territory | 96           |
| Northern Territory(a)        | 70           |
| Queensland                   | 65           |
| Victoria                     | 65           |
| New South Wales              | 57           |
| South Australia              | 56           |
| Western Australia            | 56           |
| Tasmania                     | 54           |
| <b>Australian average</b>    | <b>61</b>    |

(a) Darwin and environs and Alice Springs only.

Source: *Household Expenditure Survey, Australia: Detailed Expenditure Items, 1993–94* (6535.0).

**Book publishing**

Data were collected from 214 businesses which employed staff and were predominantly engaged in book publishing in 1995–96. Table 12.11 shows that these organisations generated \$1,256.8m in turnover, of which \$950.0m was from the sales of books. Of total book sales, \$561.1m was attributed to Australian titles.

**12.11 BOOK PUBLISHERS, 1995–96**

|                                                  | Unit | Total businesses |
|--------------------------------------------------|------|------------------|
| Organisations                                    | no.  | 214              |
| Sales of all books                               | \$m  | 950.0            |
| Sales of other products                          | \$m  | 217.2            |
| Total turnover                                   | \$m  | 1 256.8          |
| Average turnover per business                    | \$m  | 5.9              |
| Wages and salaries paid                          | \$m  | 201.1            |
| Royalties and fees paid                          | \$m  | 69.3             |
| Total costs                                      | \$m  | 1 132.5          |
| Average costs per business                       | \$m  | 5.3              |
| Sales of Australian titles                       | \$m  | 561.1            |
| Royalties and fees paid per Australian book sale | %    | 12.4             |
| Operating profit before tax                      | \$m  | 136.8            |
| Profit margin                                    | %    | 10.9             |

Source: *Book Publishers, Australia, 1995–96* (1363.0).

**Archives**

Archives are institutions whose primary function is the permanent preservation of unique records, selected because of their administrative, financial, legal or other information value. These records are generally no longer required for the

conduct of current activities by government agencies, non-government organisations or private individuals. While much archival work is an adjunct to other activity, there is a growing number of archival bodies, funded by governments and private sources, employing specialist staff to serve the legal, administrative and research needs of individuals and organisations.

Australian Archives is the Commonwealth organisation, established by the *Archives Act 1983*, responsible for the broad management of the range of Commonwealth records. The National Office of the Archives is in Canberra with offices in all States and the Northern Territory. It administers the legislative framework for Commonwealth records management (including arrangements for the disposal of records), identifies and documents records, provides appropriate custody and preservation arrangements (including archival storage) and makes records available under the law. Records covered by the Act occur in all formats, from files and index cards through to architectural models and photographs, films and video tapes to optical disks, computer databases, tapes and disks.

Australian Archives also curates touring exhibitions and produces publications based on its collections.

Some State and Territory archives have been established as separate authorities (New South Wales, Victoria, South Australia, Tasmania and the Northern Territory). Others still operate broadly under State Library control.

In addition, archives have been established by some churches, business corporations, universities and city councils. The Australian War Memorial collects private material concerning Australians at war and is also custodian of certain official Commonwealth records relating to war or warlike operations. The National Film and Sound Archive collects cultural material relevant to the film and sound media. Other corporate and private records continue to be collected by some State archives offices, libraries and universities.

Many of the bodies in the archives or records field are members of the Australian Council of Archives which provides a means of promoting cooperation on issues of common concern.

The Australian Archives has established a presence on the Internet, the World Wide Web

site 'Archives of Australia', which enables all other archives in Australia to place information about themselves and their holdings on the Internet.

### Music and performing arts

Today, Australia stands beside other nations with its own unique cosmopolitan culture. It contains elements of an indigenous past, European migration from settlement through to the present day, and more recently interaction with and migration from Australia's Asian and Pacific neighbours. Involvement in music and the performing arts has been a significant influence in the development of this culture.

Music covers all areas of the industry: composition; live performances ranging from the latest pop styles to classical instrumental, vocal and orchestral forms; recording and publishing; studio and concert performances; and the marketing of sheet music.

The performing arts concentrate on opera and musical comedy, theatre in its various forms and the various styles of dance, but also include artists working as acrobats, clowns, magicians, comedians, revue artists, poetry readers, and other performing artists.

### Important national organisations

Three important national organisations in the music and performing arts area are the Australian Ballet, Opera Australia and Musica Viva. Australia's six major professional symphony orchestras, based in each of the States, were established by the Australian Broadcasting Corporation (ABC) over a number of years from 1932. During 1997, the Melbourne and Adelaide Symphony Orchestras joined the Sydney Symphony Orchestra in forming as separate subsidiary companies of the ABC, and the Queensland, Western Australian and Tasmanian Symphony Orchestras will follow in the next few years. The orchestras continue to work as a network, related together by a new national service organisation, Symphony Australia.

The Australian Ballet was established in 1961 as the nation's classical ballet company. The company performs in most Australian capital cities every year and occasionally tours overseas. The Australian Ballet has an international reputation as one of the top ballet companies in the world. Table 12.12 shows the number of performances given by the Australian Ballet, and its employment by category, over the years 1991 to 1996.

12.12 THE AUSTRALIAN BALLET

|                              | 1991       | 1992       | 1993       | 1994       | 1995       | 1996       |
|------------------------------|------------|------------|------------|------------|------------|------------|
| PERFORMANCES                 |            |            |            |            |            |            |
| Theatres in Australia        |            |            |            |            |            |            |
| New South Wales              | 82         | 80         | 79         | 82         | 81         | 81         |
| Victoria                     | 62         | 60         | 61         | 60         | 61         | 60         |
| Queensland                   | 12         | —          | 9          | 11         | 11         | 10         |
| South Australia              | 10         | 10         | 9          | 10         | 7          | 7          |
| Western Australia            | —          | 9          | —          | —          | 6          | —          |
| Australian Capital Territory | 6          | —          | 10         | —          | 6          | 6          |
| Other venues in Australia    |            |            |            |            |            |            |
| Open air                     | —          | —          | 1          | 1          | 1          | 1          |
| ABC-TV simulcasts            | —          | —          | 1          | 1          | 2          | —          |
| Overseas                     | —          | 27         | 18         | 14         | —          | 14         |
| <b>Total performances</b>    | <b>172</b> | <b>186</b> | <b>188</b> | <b>179</b> | <b>175</b> | <b>179</b> |
| EMPLOYMENT                   |            |            |            |            |            |            |
| Dancers                      | 60         | 64         | 65         | 65         | 65         | 62         |
| Staff                        |            |            |            |            |            |            |
| Artistic                     | 8          | 8          | 8          | 9          | 9          | 8          |
| Music                        | 4          | 4          | 4          | 5          | 5          | 5          |
| Production and theatre       | 29         | 30         | 27         | 29         | 24         | 25         |
| Marketing and publicity      | 11         | 13         | 15         | 19         | 23         | 23         |
| Administration and finance   | 20         | 21         | 21         | 20         | 20         | 21         |
| <b>Total employment</b>      | <b>132</b> | <b>140</b> | <b>140</b> | <b>147</b> | <b>146</b> | <b>144</b> |

Source: Australian Ballet Foundation, Annual Reports.

In late 1996 the Australian Opera merged with the Victoria State Opera to form a new company, Opera Australia, which is the largest performing arts organisation in Australia. In 1996 it presented 249 performances to total audiences in excess of 284,000 (table 12.13). Total employees rose slightly from 1,280 in 1995 to 1,295 in 1996. (These figures and those in table 12.13 relate solely to the activity of the former Australian Opera.)

A permanent rehearsal and administration home has been purchased in Melbourne which will also serve as the base for OzOpera, the research and development arm.

**12.13 OPERA AUSTRALIA(a)**

|              | 1993    | 1994    | 1995    | 1996    |
|--------------|---------|---------|---------|---------|
|              | no.     | no.     | no.     | no.     |
| Employees    | 1 294   | 1 346   | 1 280   | 1 295   |
| Performances | 233     | 233     | 235     | 249     |
| Attendances  | 286 376 | 302 852 | 308 561 | 284 500 |

(a) Excludes operations of the Australian Opera and Ballet Orchestra, which became a subsidiary in 1993.

Source: *Opera Australia*.

Musica Viva is Australia's national chamber music entrepreneur. A non-profit company founded in 1945 with headquarters in Sydney, Musica Viva has a Board with members throughout Australia, a State committee structure and branch offices in capital cities.

During 1996, it presented concerts to over 411,000 patrons in Australia (a growth of 8.3% over 1995) and to an additional 21,000 patrons overseas (table 12.14).

During 1996 Musica Viva in Schools started operations in Queensland and the Northern

Territory to become a fully national, live music education program.

**12.14 MUSICA VIVA AUDIENCES(a)**

|                              | 1993           | 1994           | 1995           | 1996           |
|------------------------------|----------------|----------------|----------------|----------------|
|                              | no.            | no.            | no.            | no.            |
| New South Wales              | 245 191        | 256 715        | 265 194        | 288 993        |
| Victoria                     | 39 941         | 40 220         | 41 150         | 41 564         |
| Queensland                   | 9 824          | 8 681          | 8 385          | 6 735          |
| South Australia              | 8 755          | 9 853          | 10 035         | 19 681         |
| Western Australia            | 37 693         | 38 203         | 32 931         | 30 161         |
| Tasmania                     | 9 720          | 9 586          | 11 567         | 10 103         |
| Australian Capital Territory | 11 421         | 10 266         | 10 478         | 14 210         |
| Australia                    | 362 545        | 373 524        | 379 740        | 411 447        |
| Overseas                     | 27 300         | 71 380         | 52 000         | 21 000         |
| <b>Total</b>                 | <b>389 845</b> | <b>444 904</b> | <b>431 740</b> | <b>432 447</b> |

(a) Includes audiences at regional touring concerts, education concerts, subscription concerts and special events.

Source: *Musica Viva*.

The orchestras of the Symphony Australia network continue the traditions established when they were part of the former ABC Concerts Division. The orchestras present live concerts in Australia's major performing arts venues and free open-air concerts, present broadcasts on ABC radio and television, make recordings for international record labels, accompany opera and ballet performances, undertake international tours, and give performances in regional and country areas throughout Australia. In 1995–96, the six orchestras presented more than 650 concerts to audiences totalling almost one million people, and reached much larger audiences through their recording and broadcast activities.

**12.15 SYMPHONY ORCHESTRAS, Performances and Total Attendances**

|                          | 1994–95            |                   | 1995–96            |                   |
|--------------------------|--------------------|-------------------|--------------------|-------------------|
|                          | Number of concerts | Total attendances | Number of concerts | Total attendances |
|                          | no.                | no.               | no.                | no.               |
| Type of performance      |                    |                   |                    |                   |
| Paid orchestral concerts | 515                | 682 771           | 496                | 642 006           |
| School concerts          | 106                | 78 944            | 144                | 106 524           |
| Free concerts            | 31                 | 225 718           | 15                 | 188 723           |
| <b>Total</b>             | <b>652</b>         | <b>987 433</b>    | <b>655</b>         | <b>937 253</b>    |

Source: Australian Broadcasting Corporation, *Annual Report 1995–96*.

## Attendance at all performances

Attendance at music performances is a significant aspect of the cultural life of Australians. Table 12.16 shows the number of people attending popular and classical music concerts in the 12 months to March 1995. Popular music performances were the best attended, with 3.8 million people (or 26.9% of the Australian population aged 15 and over) attending at least one popular music concert, while 1.1 million (or 7.7% of the Australian population aged 15 and over) attended at least one classical music concert.

The popularity of musicals is reflected in attendance numbers at the performing arts. Table 12.17 shows that over 2.7 million people (or 19.3% of the Australian population aged 15 and over) attended at least one performance of musical theatre. Least attended were dance performances; 1.4 million (or 10% of the Australian population aged 15 and over) attended at least one dance performance in the previous 12 months.

### 12.16 ATTENDANCE AT MUSIC PERFORMANCES, 1995

| Attendees                | Popular music concert '000 | Classical music concert '000 |
|--------------------------|----------------------------|------------------------------|
| <b>Sex</b>               |                            |                              |
| Male                     | 1 861                      | 437                          |
| Female                   | 1 930                      | 644                          |
| <b>Total</b>             | <b>3 791</b>               | <b>1 081</b>                 |
| <b>Age</b>               |                            |                              |
| 15–24 years              | 1 216                      | 163                          |
| 25–34 years              | 970                        | 181                          |
| 35–44 years              | 731                        | 219                          |
| 45–54 years              | 497                        | 231                          |
| 55–64 years              | 217                        | 141                          |
| 65 years and over        | 161                        | 147                          |
| <b>Birthplace</b>        |                            |                              |
| Australian born          | 2 940                      | 758                          |
| Overseas born            | 851                        | 324                          |
| <b>Employment status</b> |                            |                              |
| Employed                 | 2 768                      | 717                          |
| Unemployed               | 247                        | 46                           |
| Not in labour force      | 776                        | 318                          |

Source: *Attendance at Selected Cultural Venues, March 1995 (4114.0).*

### 12.17 ATTENDANCE AT THE PERFORMING ARTS, 1995

| Attendees                | Dance performance '000 | Theatre      |              | Other performing arts '000 |
|--------------------------|------------------------|--------------|--------------|----------------------------|
|                          |                        | Musical '000 | Other '000   |                            |
| <b>Sex</b>               |                        |              |              |                            |
| Male                     | 515                    | 1 021        | 906          | 1 210                      |
| Female                   | 892                    | 1 701        | 1 430        | 1 425                      |
| <b>Total</b>             | <b>1 408</b>           | <b>2 722</b> | <b>2 336</b> | <b>2 634</b>               |
| <b>Age</b>               |                        |              |              |                            |
| 15–24 years              | 310                    | 531          | 547          | 669                        |
| 25–34 years              | 278                    | 501          | 507          | 707                        |
| 35–44 years              | 319                    | 530          | 480          | 590                        |
| 45–54 years              | 254                    | 544          | 401          | 349                        |
| 55–64 years              | 121                    | 303          | 216          | 169                        |
| 65 years and over        | 125                    | 313          | 186          | 152                        |
| <b>Birthplace</b>        |                        |              |              |                            |
| Australian born          | 1 030                  | 2 092        | 1 776        | 2 074                      |
| Overseas born            | 378                    | 630          | 561          | 560                        |
| <b>Employment status</b> |                        |              |              |                            |
| Employed                 | 956                    | 1 853        | 1 632        | 1 872                      |
| Unemployed               | 84                     | 102          | 122          | 150                        |
| Not in labour force      | 367                    | 767          | 582          | 612                        |

Source: *Attendance at Selected Cultural Venues, Australia, March 1995 (4114.0).*

## Film and video

### Film and video production

Australia has a well developed audiovisual production industry which is composed, for the most part, of small specialised companies. They produce programs ranging from feature films to sports coverage, documentaries and television commercials. A relatively small number of companies engage exclusively in film and television drama production. The majority specialise in the production of commissioned programs such as commercials and corporate communications.

The major market for Australian audiovisual producers is the domestic television broadcast industry. Export markets are important mainly for feature films and television dramas, some high-budget documentaries and some commercials.

Private and public television stations produce a large volume of programming — including drama and situation comedy, news and current affairs, light entertainment, 'infotainment' and sketch comedy, sports coverage, and children's programs — at an estimated cost in excess of \$840m.

The film and video production industry comprises businesses mainly engaged in the production of motion pictures on film or video tape for theatre or television projection. Services such as casting, film editing and titling are also included.

Table 12.18 shows the findings of a survey of the film and video production industry conducted by the ABS in respect of 1993–94. At the end of June 1994, there were 1,179 businesses in the film and video production industry. These businesses employed a total of 5,998 persons and generated \$467.7m from the sales of goods

and services, and a further \$121.2m from the sale of rights for completed works. The industry had a total income of \$607.7m and expenses of \$705.8m, resulting in an operating loss of \$98.1m. An amount of \$463.0m was spent on the production of films and videos. This consisted of \$184.2m on productions made for television, \$143.4m on productions other than for television (including \$87.3m on feature films), and \$135.4m on production of commercials and advertisements. During 1993–94, the industry completed or was working on 4,420 productions (the majority of which (3,733) related to corporate/marketing/training videos), and 29 feature films were in production or were completed.

The Commonwealth Government provides assistance and encouragement, through measures such as the investment program of the Australian Film Finance Corporation and the Australian content regulations of the Australian Broadcasting Authority, to enable the production of high cost feature films, television dramas and documentaries. Table 12.19 shows the number and value of all Australian titles produced from 1991–92 to 1995–96.

**12.18 FILM AND VIDEO PRODUCTION  
INDUSTRY, Summary of Operations — 1993–94**

|                              | Unit |       |
|------------------------------|------|-------|
| Businesses at end June       | no.  | 1 179 |
| Total employment at end June | no.  | 5 998 |
| Sales of goods and services  | \$m  | 467.7 |
| All other income             | \$m  | 140.1 |
| Total expenses               | \$m  | 705.8 |
| Operating profit before tax  | \$m  | -98.1 |

Source: *Film and Video Production and Distribution, 1993–94* (8679.0).

**12.19 AUSTRALIAN FILM INDUSTRY, Number and Value of Australian Titles(a)**

| Type of film       | 1991–92   |            | 1992–93   |            | 1993–94   |            | 1994–95   |            | 1995–96   |            |
|--------------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
|                    | no.       | \$m        | no.       | \$m        | no.       | \$m        | no.       | \$m        | no.       | \$m        |
| Features           | 34        | 135        | 24        | 91         | 31        | 210        | 20        | 113        | 30        | 221        |
| Mini-series        | 6         | 26         | 14        | 79         | 4         | 33         | 12        | 69         | 17        | 129        |
| Series and serials | 26        | 69         | 14        | 69         | 16        | 100        | 17        | 98         | 20        | 91         |
| Telemovies         | 5         | 6          | 10        | 26         | 14        | 24         | 22        | 54         | 18        | 38         |
| <b>Total</b>       | <b>71</b> | <b>237</b> | <b>62</b> | <b>266</b> | <b>65</b> | <b>367</b> | <b>71</b> | <b>334</b> | <b>85</b> | <b>478</b> |

(a) Includes co-productions, foreign titles shot in Australia and Australian titles shot overseas.

Source: *Australian Film Commission*.

## Film and video distribution

The film and video distribution industry comprises businesses mainly engaged in leasing or wholesaling motion pictures on film or video tape to organisations for exhibition or sale. Agents mainly engaged in leasing and wholesaling films and videos to organisations are also included.

Table 12.20 shows that, at 30 June 1994, there were 69 businesses in the industry, employing 981 people. These businesses generated \$571.1m from the sales of goods and services, and had an operating profit before tax of \$39.6m.

During 1993–94, 4,678 Australian titles were distributed worldwide, of which 4,346 were distributed in Australia.

**12.20 FILM AND VIDEO DISTRIBUTION INDUSTRY, Summary of Operations — 1993–94**

|                             | Unit |       |
|-----------------------------|------|-------|
| Businesses at end June      | no   | 69    |
| Total employment            | no   | 981   |
| Sales of goods and services | \$m  | 571.1 |
| All other income            | \$m  | 69.6  |
| Total expenses              | \$m  | 601.1 |
| Operating profit before tax | \$m  | 39.6  |

Source: *Film and Video Production and Distribution, Australia, 1993–94* (8679.0).

## Motion picture exhibition

The motion picture exhibition industry comprises businesses mainly engaged in screening motion pictures on film or video tape. It also includes businesses mainly engaged in drive-in theatre operation, cinema operation and film or video festival operation.

Some of the findings of a survey on the motion picture exhibition industry, conducted by the ABS in respect of the 1993–94 financial year, are shown in table 12.21. At the end of June 1994, there were 224 businesses in the industry, employing 5,729 people.

The motion picture exhibition industry had an operating profit before tax of \$75.1m for 1993–94, which represented a relatively high operating profit margin of 12%, compared with the average 8.9% achieved by all industries in the Australian economy for that year.

At the end of June 1994, there were 329 cinema sites and 41 drive-in sites in Australia. For

1993–94 the total number of paid admissions for cinemas and drive-ins was 61.6 million.

**12.21 MOTION PICTURE EXHIBITION INDUSTRY, Summary of Operations — 1993–94**

|                             | Unit |        |
|-----------------------------|------|--------|
| Number of businesses        | no.  | 224    |
| Employment                  | no.  | 5 729  |
| Number of paid admissions   |      |        |
| Cinemas                     | '000 | 60 047 |
| Drive-ins                   | '000 | 1 557  |
| Total expenses              | \$m  | 560.1  |
| Gross income                | \$m  | 635.1  |
| Operating profit before tax | \$m  | 75.1   |

Source: *Motion Picture Exhibition, Australia, 1993–94*, (8654.0).

## Cinema attendance

The March 1995 Survey of Attendance at Selected Cultural Venues provided the first ABS figures for cinema attendances in Australia for persons aged 15 years and over. Over 8.7 million persons (or 62.1% of the Australian population aged 15 and over) attended a hardtop cinema, drive-in or other public screening of a film at least once in the 12 months ending 31 March 1995.

**12.22 ATTENDANCE AT CINEMAS, Persons Aged 15 and Over — 1995**

|                     |              |
|---------------------|--------------|
| Attendees           | '000         |
| Sex                 |              |
| Male                | 4 075        |
| Female              | 4 658        |
| <b>Total</b>        | <b>8 734</b> |
| Age                 |              |
| 15–24 years         | 2 351        |
| 25–34 years         | 2 051        |
| 35–44 years         | 1 829        |
| 45–54 years         | 1 255        |
| 55–64 years         | 627          |
| 65 years and over   | 620          |
| Birthplace          |              |
| Australian born     | 6 720        |
| Overseas born       | 2 014        |
| Employment status   |              |
| Employed            | 5 954        |
| Unemployed          | 522          |
| Not in labour force | 2 258        |

Source: *Attendance at Selected Cultural Venues, March 1995* (4114.0).



## Video hiring and watching

In a survey in February 1994 conducted by the Population Survey Monitor, the ABS asked questions about video watching. Just under 60% of households with children viewed a video in the two weeks prior to the survey, while 39.5% of adults reported that they had viewed a video in that period. The survey also found that almost 5.1 million households (79.3% of all households in Australia) had a video recorder and that just under 58% had hired at least one video in the previous month.

## Multimedia

Multimedia is rapidly emerging as a significant new creative medium. Multimedia is a presentation, via an electronic non-linear delivery system, of some combination of media forms such as voice, music, video, photographs, graphics, animation and text. An electronic non-linear delivery system is a combination of hardware and software which gives the user control over the order in which content is accessed. A few years ago, different equipment or products were required to experience these methods of presentation, but recent advances in computer technology have enabled them all to be available in one package on a desktop computer.

Developments in new media have made on-line services such as the Internet increasingly easy for people to use.

Until a few years ago, most computer software was aimed primarily at business and education markets. However the household market has grown rapidly in recent years. In 1996, 30.6% (2,024,000) of households in Australia frequently used a computer at home, up from 23% two years earlier. Computer use was more prevalent in households comprising a married couple with children (55.0% of such households) than in other households. Of the households with a computer, 46.7% (945,000) were equipped with a CD-ROM drive, up from 12.5% in February 1994, and 26.3% had a modem or external link compared to 17% two years earlier. Since 1993 most new computers sold in Australia have been equipped with CD-ROM drives, increasing the market for multimedia products on CD-ROMs.

The storage capacity of CD-ROMs and market penetration of CD-ROM drives have made them the leading platform for multimedia products (or 'titles'). Of the multimedia titles described in the Australian Film Commission's *Australian*

*Multimedia Catalogue 1996*, 82% are for this platform. On-line multimedia services are hampered by the capacities of public communications networks. However the rollout of optical fibre cable by telecommunications companies, increasing publicity about information available on the Internet, declining costs of access, and the potential for modems to be packaged with new personal computers, will all contribute to an expanding market for on-line services.

In October 1994, the Commonwealth Government released its cultural policy statement *Creative Nation*, which introduced a series of initiatives designed to ensure that Australia was in the forefront of this emerging world business. Initiatives included funding for the establishment of the Australian Multimedia Enterprise to encourage investment in Australian multimedia products and services, and Cooperative Multimedia Centres to provide access to training, expertise and facilities; funding for the *Australia on CD* program; funding for the Australian Film Commission, the Australian Film, TV and Radio School and the Australian Children's TV Foundation to extend their multimedia projects; and sponsorship of industry forums. All of these programs continue to operate.

The Department of Communications and the Arts, through multimedia programs such as *Australia on CD*, *Australia's Cultural Network* and *Australian Museums on Line*, has undertaken to promote and provide access to Australia's cultural collections while forming partnerships with the cultural institutions and multimedia producers involved. The Department has developed ArtsInfo as a single point of access to the Australian cultural sector.

The *Australia on CD* program is designed to showcase a wide range of Australian cultural endeavour, artistic performance and heritage achievements and to foster the development of the Australian multimedia industry.

Through the *Australia on CD* program, the Commonwealth Government is funding the production of ten interactive CD-ROMs. The CD-ROM titles cover a range of areas such as Australia's prehistory, the environment, the performing and visual arts, sport, science and rock'n'roll.

Two copies of each title will be distributed to all Australian primary and secondary schools, public

libraries, Austrade offices, overseas missions and members of Parliament.

*Australia's Cultural Network* is 'the on-line gateway to Australia's cultural organisations, resources, activities and events'. The Network has two main objectives: to improve and develop on-line access to and participation in Australian cultural endeavour, activities and events; and improve the prosperity of Australian cultural organisations, commerce and cultural workers.

This gateway website provides fast access to hundreds of cultural websites nation-wide. A national calendar of cultural events is a key feature of the site, which also contains a range of resources to assist Australian cultural industries.

The *Performing Arts Multimedia Library* will involve the creation of a digital library of significant Australian performances, new and existing, across the range of live performance, for use in multiple electronic environments such as the Internet (via Australia's Cultural Network), Pay TV, video and multimedia.

The library will be used as a test-bed program for government and industry to identify and attempt to resolve the legal, contractual and technical issues associated with the recording and electronic distribution of recorded performances.

The Heritage Collections Committee's On Line Working Party commenced work early in 1994 on the development of a national database for heritage items. The *Australian Museums On Line* Internet site gives access to Australia's national, regional and local museums and their collections and offers a range of services to museums and the wider community. The comprehensive directory on the site of over 830 museums and gallery collections throughout Australia will grow to about 950 by the end of September 1997, giving details of their collections. A new search facility is currently being trialed.

*ArtsInfo* brings together information on cultural grants, support and industry development programs offered by the three levels of government and their agencies, as well as assistance through corporations, foundations and non-government bodies.

The *ArtsInfo* home page on the Internet provides additional services including the *Smarts* industry magazine on-line, and a resource section containing cultural statistics and references to accredited training courses and

industry bulletin boards. *ArtsInfo* includes a cultural business directory showcasing Australia's export products and services.

## Radio and television broadcasting

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Minister for Communications and the Arts. Commonwealth bodies which are involved include Telstra, the Australian Broadcasting Corporation (ABC), the Special Broadcasting Service (SBS), the Australian Broadcasting Authority (ABA), the Department of Communications and the Arts, the Australian Telecommunications Authority (AUSTEL), and the Australian Communications Authority (formerly the Spectrum Management Agency).

Basically, the Australian broadcasting system comprises the following types of services:

- national radio and television services broadcasting programs produced by the Australian Broadcasting Corporation and the Special Broadcasting Service;
- commercial radio and television services operated by companies under licence;
- subscription television services;
- community radio services operated by incorporated associations under licence on a non-profit basis; and
- Parliamentary radio service to State capitals, and to Canberra and Newcastle.

## National Transmission Agency (NTA)

The NTA, which is a part of the Department of Communications and the Arts, is responsible for the design, construction, operation and maintenance of a complex network of transmission facilities used primarily for the transmission of the programs of the ABC and SBS throughout Australia. In regional and remote areas, commercial licensees make extensive use of the NTA's transmission facilities to deliver their services, as do radiocommunications operators.

During 1996–97 the NTA increased the signal coverage of the network by adding 54 transmitters, resulting in an additional 2.7 million people gaining access to various national radio and television services. The number of transmitters accommodated at NTA



sites but owned by commercial, community and self-help operators rose from 503 to 522.

The Commonwealth Government has announced that it will sell the transmission facilities by open tender, and anticipates that the sale will be completed by 30 June 1998.

### Australian Broadcasting Corporation (ABC)

At 30 June 1997 the ABC provided:

- six distinctly targeted radio networks across Australia on over 6,000 transmitters which include Metropolitan Radio stations in nine cities, Regional Radio with 39 regional stations and 11 smaller studios, Radio National, ABC-FM, and the Triple-J youth radio network;
- a national television service carried on about 600 transmitters;
- Radio Australia, an international radio service broadcast by shortwave to Papua New Guinea and the Pacific and via satellite to the Asia-Pacific regions in English and other languages;
- Australia Television, an international satellite television service broadcasting to over 30 countries and territories in Asia and the Pacific;
- a 24 hour news and parliamentary broadcast radio service to all capital cities (except Darwin), and to Newcastle; and
- an international network of press offices.

The ABC also operates a network of retailing outlets (24 shops and 119 ABC centres) known as ABC Enterprises. Operations include the production of books, classical and contemporary recordings, audio cassettes, videos, multimedia and licensed products, and music and magazine publishing.

During 1996–97, the ABC entered into negotiations to sell ATV (a satellite service to Asia) to a commercial operator, which announced in July 1997 that it will be entering into an agreement with the Seven Network to take over the running of ATV. The ABC will continue to be involved as a preference shareholder and program supplier.

As indicated earlier, the ABC is in the process of corporatising its symphony orchestras through a new subsidiary company, Symphony Australia (see table 12.14 and accompanying text).

### Special Broadcasting Service (SBS)

The SBS was established by the Commonwealth Government on 1 January 1978. Its principal function is to provide multilingual radio and television services that inform, educate and entertain all Australians and, in doing so, reflect Australia's multicultural society.

SBS Television broadcasts nationally and services areas containing more than 17 million people. In early 1997 coverage was extended to the Albury/Wodonga and Grafton/Coffs Harbour areas, and further extensions in 1998 and 1999 will serve the New South Wales Central Tablelands, Tamworth, Upper Namoi and Rockhampton. SBS Television's programs, gathered from more than 600 international and national sources, are broadcast in more than 60 languages.

SBS Radio, which began in Sydney and Melbourne in 1975, became the world's first national multicultural radio service on 26 January 1994 with the extension of services to Adelaide, Perth, Darwin and Brisbane. By June 1996, when broadcasting began in Hobart, SBS Radio was available in all capital cities and in the regional centres of Wollongong, Newcastle, the Hunter region and Geelong. It broadcasts in 68 languages and operates a national signal and an AM and FM signal in Sydney and Melbourne.

The focus of the Corporation's capital spending has centred on upgrading outdated technology and acquiring digital technology. Delivery of SBS Radio and Television programs continues to be via the Optus satellite system, except for Sydney and Melbourne services. SBS currently uses analogue technology for its satellite program distribution (incorporating 150 television transmitters), but has entered into agreements to convert these to digital during 1998.

### Radio and television operations

#### Australian Broadcasting Authority (ABA)

The Authority, established in October 1992 under the *Broadcasting Services Act 1992*, is the broadcasting regulator for radio and television in Australia. As well as planning the availability of segments of the broadcasting services bands (VHF/UHF television, FM and AM radio), the Authority has the power to allocate, renew, suspend and cancel licences and collect any fees payable for those licences.

The Authority is empowered to conduct research into community attitudes on programming matters, develop program standards relating to broadcasting in Australia, assist broadcasting service providers (licensees) develop codes of practice, monitor compliance with licence conditions and investigate complaints about services.

The authority monitors the suitability of licensees to ensure compliance with ownership and control provisions of the Act. In addition, the Authority is required to inform itself and the Minister about functions and trends in broadcasting technology.

Licenses for commercial television broadcasting services are subject to five year terms, compulsory standards on Australian content and children's television and a condition that the licensee be a suitable person. Ownership and control limitations also apply. Under these conditions, no person may be in a position to control more than one television licence in a market or control licences with a combined audience reach of more than 75% of the Australian population. Foreign control of television licences is also restricted. Commercial licences may be transferred at will, subject only to notification requirements under the ownership and control rules. Commercial radio broadcasting licences are subject to less restrictive ownership provisions.

Community radio and television are not subject to ownership limitations, and subscription radio broadcasting services and all categories of narrowcasting services are also not subject to ownership limits or suitability requirements.

In 1996–97 the Authority issued three new commercial television licences, 12 new commercial radio licences and five new community radio licences. There was no demand for non-satellite pay TV licences in 1996–97.

Demand for new services offered by open narrowcasting radio continued and the Authority issued a number of different types of licences to meet this demand. Each type of licence is subject to different conditions. The Authority issued 55 transmitter licences for open narrowcasting services using a price-based allocation system: 53 radio and 2 television. The Authority also issued 165 transmitter licences for low power open narrowcasting services before the responsibility for issuing these licences was given to the Spectrum Management Agency (now the Australian Communications Authority) in November 1996. Total low power open narrowcasting licences number about 1,600.

The Authority also issues licences for the broadcast of special events: in 1996–97, 148 special events licences were issued. Also 494 open narrowcasting licences were issued for temporary transmissions by aspirant community broadcasters, making a total of 1,613 issued since October 1992.

During 1996–97, the Authority issued, under the *Radiocommunications Act 1992*, 41 apparatus licences for national (ABC and SBS) television and radio services, and it renewed the licences for 20 commercial radio and 20 community radio services.

### Radio and television services — summary of operations

Table 12.23 provides a summary of the operations of radio and television services for 1993–94 from an ABS survey. At 30 June 1994, there were 314 organisations in the radio and television services industry. Total employment in the industry was 19,375 persons, with 12,211 (63%) employed in the television services industry and 7,164 (37%) in the radio services industry. Total sales of goods and services were valued at \$2,699.2m, with television services generating \$2,174.5m (81%) and radio services accruing \$524.7m (19%). In addition, there was a further \$776.7m of income received by the industry which mainly related to government funding for government-owned broadcasters.

The radio and television services industry recorded an operating profit before tax of \$394.6m for the year ended 30 June 1994. The television services industry recorded an operating profit before tax of \$376.9m, while the radio industry recorded a smaller profit of \$17.7m. Private broadcasters recorded a profit of \$396.1m during the year, which represented an operating profit margin of 15%.

**12.23 RADIO AND TELEVISION SERVICES, Summary of Operations — 1993–94**

|                             | Unit | Radio services | Television services | Total   |
|-----------------------------|------|----------------|---------------------|---------|
| No. of organisations        | no.  | 268            | 46                  | 314     |
| Total employment            | no.  | 7 164          | 12 211              | 19 375  |
| Sales of goods and services | \$m  | 524.7          | 2 174.5             | 2 699.2 |
| All other income            | \$m  | 274.9          | 501.8               | 776.7   |
| Total expenses              | \$m  | 781.9          | 2 299.4             | 3 081.3 |
| Operating profit before tax | \$m  | 17.7           | 376.9               | 394.6   |

Source: *Radio and Television Services, Australia, 1993–94* (8680.0).

Radio and television — listening and viewing habits

The 1992 Time Use Survey provided an insight into how Australians spend their time listening to the radio and watching television. While people spend on average more than one and half hours a day listening to radio, during almost all of that time they are doing a more important (main) activity, whereas for nearly 60% of the time that people watch television it is their main activity.

| 12.24 AVERAGE TIME SPENT LISTENING TO RADIO AND WATCHING TELEVISION STATIONS, Minutes per day — 1992 |                    |                           |
|------------------------------------------------------------------------------------------------------|--------------------|---------------------------|
| Activity                                                                                             | As a main activity | As part of all activities |
| Radio stations                                                                                       | 4                  | 101                       |
| Television stations                                                                                  | 103                | 172                       |

Source: Time Use Survey, Australia, 1992 (4153.0) unpublished data.

Training in the arts

Training in the arts in Australia covers a broad range of resources. Formal training is available through courses in Technical and Further Education institutions, universities and private institutions. A number of on-the-job training programs are also available in the arts and many organisations offer in-house training programs for their staff. The last decade has seen the development, in some States, of multi-disciplinary tertiary institutions providing training in the arts.

CREATE Australia is the national peak advisory body on vocational education and training for the arts, media, entertainment and heritage industries. It is one of a number of Industry Training Advisory Bodies supported by industry and government. CREATE Australia’s primary purpose is to promote and enhance the quality and effectiveness of vocational training and education by providing a forum through which industry can express its vocational education and training needs. CREATE Australia’s industry coverage encompasses the design, film, television and radio, music, performing arts, visual arts and crafts, museums, libraries, community arts and publishing industries.

A number of national specialised education institutions have been established to provide training in cultural fields. For example, the Australian Film, Television and Radio School is

the national training centre for the film and broadcasting industries. The National Institute of Dramatic Art is the national training school for people who wish to enter the profession of theatre, film or television as actors, directors, designers, stage managers, theatre crafts technicians, production managers or teachers of voice and movement. The Australian Ballet School provides full-time training to the highest standard for young Australian dancers seeking a career in the classical dance profession. The Australian National Academy of Music offers master classes and short-term programs which bring distinguished national and international performers and music educators into contact with students.

Festivals

Festivals have become a major part of Australian life, offering a unique and valuable contribution to our cultural life. Community festivals in regional Australia are increasing both in number and popularity. They range in size from small community celebrations to major cultural events, and feature a variety of themes as diverse as flower arranging, heritage, food and wine, multicultural events, music and the arts.

There are now some 1,300 festivals Australia-wide, ranging from major international events such as the Sydney, Melbourne and Adelaide International Festivals to the more regional and community based events. These festivals provide tangible benefits by giving their communities a creative focus, generating pride in the community and providing economic benefits by attracting tourists to the area.

The last 10 years or so have seen the establishment of several new, important arts festivals in Australia. Music festivals constitute the largest group of festivals, almost half of them devoted to jazz. On average, arts festivals attract 20–25% of their audience from outside their local communities. Volunteers play a major role in the organisation and operation of festivals. Even for those festivals with paid staff, the average number of staff employed is quite small.

Table 12.25 reflects the findings of a survey of festivals conducted in 1995 by the Australia Council, and shows that the total government grant, backing small and large arts festivals in Australia, amounted to \$13.3m. Box office and subscription sales for larger arts festivals amounted to \$16.6m, while sponsorships and donations amounted to \$10.7m. Income totalled

\$46.9m for larger arts festivals and \$7.6m for smaller arts festivals. The Australia Council defined large festivals as those with expenditure of \$300,000 and above. Using this measure, 31 arts festivals were included in the 'larger' group.

#### 12.25 OPERATING INCOME AND EXPENDITURE OF ARTS FESTIVALS, 1995

|                          | Larger arts festivals | Smaller arts festivals |
|--------------------------|-----------------------|------------------------|
|                          | \$m                   | \$m                    |
| Government funding       | 11.5                  | 1.8                    |
| All other income         | 35.4                  | 5.8                    |
| <i>Total income</i>      | 46.9                  | 7.6                    |
| Salaries and fees        | 17.0                  | 3.0                    |
| All other expenditure    | 28.9                  | 4.6                    |
| <i>Total expenditure</i> | 45.9                  | 7.6                    |

Source: Australia Council, Festival Survey 1995.

#### 12.26 ATTENDANCES AT FESTIVALS(a)(b), November 1995 to September 1996

|                                  | Attendances  |              |              |
|----------------------------------|--------------|--------------|--------------|
|                                  | Males        | Females      | Persons      |
|                                  | '000         | '000         | '000         |
| Main arts festivals              | 1 101        | 1 303        | 2 404        |
| Other festivals                  |              |              |              |
| Art/museum exhibition            | 138          | 149          | 287          |
| Popular music                    | 335          | 297          | 632          |
| Classical music                  | 32           | 31           | 63           |
| Film/video                       | 115          | 136          | 252          |
| Theatre                          | *17          | 50           | 67           |
| Dance                            | 53           | 35           | 88           |
| Other performing arts            | 89           | 77           | 166          |
| Craft                            | *17          | 24           | 42           |
| Other                            | 42           | 50           | 92           |
| <i>Total</i>                     | 840          | 849          | 1 689        |
| <b>Total attendances</b>         | <b>1 941</b> | <b>2 152</b> | <b>4 094</b> |
| Total number of people attending | 1 335        | 1 518        | 2 853        |
|                                  | %            | %            | %            |
| Participation rate(c)            | 20.8         | 23.0         | 21.9         |

(a) Attendance during the previous 12 months. (b) Includes all people who attended a festival, whether they went to paid or free events. (c) For each group the total number attending expressed as a percentage of the civilian population in that group.

Source: Attendance at Festivals, Australia, November 1995 to September 1996, Department of Communications and the Arts.

Four quarterly surveys from November 1995 to September 1996, of attendance at festivals over the previous 12 months, were conducted by the ABS Population Survey Monitor. Over half of the attendances (2.4 million or 58.7%) were to main arts festivals, followed by popular music festivals (632,000 or 15.4%), art/museum exhibitions (287,000 or 7.0%) and film/video festivals (252,000 or 6.2%). Females were more likely to have attended a festival in the previous 12 months (23.0%) than males (20.8%) (table 12.26).

## Employment and participation in cultural activities

This section contains a selection of ABS statistical data ranging over the whole spectrum of cultural industries and activities. More comprehensive data can be found in the publications listed in the Bibliography.

### Employment in cultural occupations

According to the 1996 Census of Population and Housing, the number of people working in a cultural occupation as their main job was 156,739. Females accounted for 50.1% of these people — this is much higher than their proportion (44.1%) in the employed labour force. Table 12.27 shows that the most common cultural occupations were architects, graphic designers, librarians, library assistants and music teachers.

12.27 NUMBER OF PERSONS IN SELECTED CULTURAL OCCUPATIONS, 1996

| Occupation group                         | Males | Females | Total  |
|------------------------------------------|-------|---------|--------|
| Media producers                          | 2 863 | 1 889   | 4 752  |
| Environment, parks and landcare managers | 1 889 | 447     | 2 336  |
| Architects                               | 8 290 | 1 671   | 9 961  |
| Librarians                               | 1 723 | 7 843   | 9 566  |
| Music teachers                           | 2 121 | 4 992   | 7 113  |
| Dance teachers                           | 380   | 2 381   | 2 761  |
| Painters (visual arts)                   | 1 126 | 1 288   | 2 414  |
| Potters and ceramic artists              | 898   | 1 257   | 2 155  |
| Photographers                            | 4 405 | 1 854   | 6 259  |
| Fashion designers                        | 499   | 2 167   | 2 666  |
| Graphic designers                        | 7 066 | 6 020   | 13 086 |
| Interior designers                       | 1 032 | 1 954   | 2 986  |
| Editors                                  | 1 152 | 1 094   | 2 246  |
| Print journalists                        | 3 238 | 2 585   | 5 823  |
| Authors                                  | 1 216 | 1 128   | 2 344  |
| Instrumental musicians                   | 4 208 | 1 325   | 5 533  |
| Radio presenters                         | 1 717 | 415     | 2 132  |
| Architectural associates                 | 4 164 | 939     | 5 103  |
| Library technicians                      | 561   | 4 940   | 5 501  |
| Sound technicians                        | 2 550 | 332     | 2 882  |
| Library assistants                       | 1 236 | 7 379   | 8 615  |
| Ticket collectors and ushers             | 1 550 | 1 275   | 2 825  |

Source: 1996 Census.

## Involvement in culture and leisure activities

In March 1997 an ABS survey collected information about the involvement of persons aged 15 and over in selected culture and leisure activities during the previous 12 months. Work in selected culture and leisure activities was defined to include both paid and unpaid involvement, but excluded involvement solely for the respondent's own use or that of their family.

As table 12.28 shows, during the 12 months ended March 1997, 2.2 million people (15.1% of

the Australian population aged 15 and over) were involved in selected culture and leisure activities, an increase of 36.5% since 1993. Of these persons, 40.2% received some payment (table 12.28).

Many persons were involved in more than one type of activity. There were over 3.7 million involvements, the most popular activities being writing, organising fetes, teaching cultural activities, music, design and performing arts. Most of these involvements were of a short-term and part-time nature, being 13 weeks or less duration and less than 10 hours a week.

**12.28 PERSONS INVOLVED IN CULTURE AND LEISURE ACTIVITIES, 12 Months to March 1997**

|                | Paid involvement only | Unpaid involvement only | Paid and unpaid involvement | Total persons involved | Persons with no involvement | Total persons   | Participation rate |
|----------------|-----------------------|-------------------------|-----------------------------|------------------------|-----------------------------|-----------------|--------------------|
|                | '000                  | '000                    | '000                        | '000                   | '000                        | '000            | %                  |
| <b>MALES</b>   |                       |                         |                             |                        |                             |                 |                    |
| NSW            | 61.3                  | 165.7                   | 88.7                        | 315.7                  | 2 094.4                     | 2 410.2         | 13.1               |
| Vic.           | 46.4                  | 126.2                   | 58.9                        | 231.5                  | 1 541.4                     | 1 772.9         | 13.1               |
| Qld            | 30.7                  | 106.2                   | 50.0                        | 186.9                  | 1 113.3                     | 1 300.2         | 14.4               |
| SA             | 14.4                  | 57.1                    | 25.0                        | 96.6                   | 482.1                       | 578.6           | 16.7               |
| WA             | 16.0                  | 52.2                    | 26.4                        | 94.6                   | 594.1                       | 688.8           | 13.7               |
| Tas.           | 3.4                   | 15.1                    | 9.2                         | 27.7                   | 153.9                       | 181.6           | 15.3               |
| NT             | 1.1                   | 4.0                     | 2.2                         | 7.3                    | 44.6                        | 51.9            | 14.1               |
| ACT            | 6.2                   | 13.3                    | 9.9                         | 29.3                   | 86.0                        | 115.3           | 25.4               |
| <b>Aust.</b>   | <b>179.5</b>          | <b>539.9</b>            | <b>270.3</b>                | <b>989.6</b>           | <b>6 109.8</b>              | <b>7 099.4</b>  | <b>13.9</b>        |
| <b>FEMALES</b> |                       |                         |                             |                        |                             |                 |                    |
| NSW            | 56.4                  | 231.4                   | 87.3                        | 375.1                  | 2 125.7                     | 2 500.7         | 15.0               |
| Vic.           | 36.5                  | 197.1                   | 59.1                        | 292.7                  | 1 558.4                     | 1 851.1         | 15.8               |
| Qld            | 24.0                  | 145.4                   | 53.3                        | 222.7                  | 1 106.5                     | 1 329.2         | 16.8               |
| SA             | 10.4                  | 74.8                    | 28.3                        | 113.5                  | 485.4                       | 598.9           | 18.9               |
| WA             | 17.3                  | 72.8                    | 28.6                        | 118.7                  | 577.6                       | 696.3           | 17.0               |
| Tas.           | 2.6                   | 20.9                    | 6.6                         | 30.1                   | 157.7                       | 187.8           | 16.1               |
| NT             | 0.8                   | 6.1                     | 3.8                         | 10.6                   | 40.2                        | 50.8            | 20.9               |
| ACT            | 3.9                   | 18.9                    | 8.4                         | 31.3                   | 88.2                        | 119.4           | 26.2               |
| <b>Aust.</b>   | <b>151.9</b>          | <b>767.4</b>            | <b>275.4</b>                | <b>1 194.7</b>         | <b>6 139.7</b>              | <b>7 334.4</b>  | <b>16.3</b>        |
| <b>PERSONS</b> |                       |                         |                             |                        |                             |                 |                    |
| NSW            | 117.8                 | 397.1                   | 176.0                       | 690.8                  | 4 220.1                     | 4 910.9         | 14.1               |
| Vic.           | 82.8                  | 323.3                   | 118.0                       | 524.2                  | 3 099.8                     | 3 624.0         | 14.5               |
| Qld            | 54.7                  | 251.6                   | 103.3                       | 409.5                  | 2 219.8                     | 2 629.4         | 15.6               |
| SA             | 24.8                  | 132.0                   | 53.3                        | 210.1                  | 967.5                       | 1 177.5         | 17.8               |
| WA             | 33.3                  | 125.0                   | 55.1                        | 213.4                  | 1 171.7                     | 1 385.1         | 15.4               |
| Tas.           | 6.0                   | 36.0                    | 15.8                        | 57.9                   | 311.6                       | 369.4           | 15.7               |
| NT             | 1.9                   | 10.1                    | 5.9                         | 17.9                   | 84.8                        | 102.7           | 17.4               |
| ACT            | 10.1                  | 32.2                    | 18.3                        | 60.6                   | 174.1                       | 234.7           | 25.8               |
| <b>Aust.</b>   | <b>331.4</b>          | <b>1 307.2</b>          | <b>545.6</b>                | <b>2 184.2</b>         | <b>12 249.5</b>             | <b>14 433.8</b> | <b>15.1</b>        |

Source: Work In Selected Culture/Leisure Activities, Australia, March 1997 (6281.0).

## Government funding for culture

Culture in Australia receives considerable financial support from the Commonwealth Government in the form of direct grants and through the provision of taxation benefits. This support is complemented by State, Territory and local governments.

Total outlays for cultural funding of the Commonwealth Government and State/Territory

and local governments for 1995–96 were \$3,195m, the largest funding category being for radio and television broadcasting (\$805m) from the Commonwealth. Table 12.29 shows the government outlays on culture for 1995–96.

The largest funding category for State Governments is national parks and wildlife services (\$483m in 1995–96). For local governments the largest cultural funding category is libraries and archives (\$296m in 1995–96).

### 12.29 CULTURAL FUNDING BY COMMONWEALTH, STATE/TERRITORY AND LOCAL GOVERNMENTS, 1995–96

|                                         | Level of government |                 |              | Total          |
|-----------------------------------------|---------------------|-----------------|--------------|----------------|
|                                         | Commonwealth        | State/Territory | Local        |                |
|                                         | \$m                 | \$m             | \$m          | \$m            |
| Recreational facilities and services    |                     |                 |              |                |
| Public halls and civic centres          | —                   | 1.5             | 182.4        | 183.9          |
| National parks and wildlife services    | 105.3               | 483.4           | 1.9          | 590.6          |
| <i>Total</i>                            | 105.3               | 484.9           | 184.3        | 774.5          |
| Cultural facilities and services        |                     |                 |              |                |
| Zoological and botanic gardens          | 2.2                 | 58.2            | 10.1         | 70.5           |
| Libraries and archives                  | 74.4                | 218.9           | 295.6        | 588.9          |
| Literature and publishing               | 11.4                | 3.4             | 0.6          | 15.3           |
| Museums                                 | 49.5                | 119.8           | 7.3          | 176.6          |
| Art galleries                           | 24.7                | 68.7            | 16.8         | 110.2          |
| Visual arts/crafts and photography      | 19.5                | 9.2             | 2.1          | 30.8           |
| Performing arts venues and arts centres | —                   | 88.3            | 39.7         | 128.1          |
| Music (excluding opera)                 | 19.8                | 10.7            | 2.9          | 33.3           |
| Other performing arts                   | 40.1                | 43.9            | 3.8          | 87.7           |
| Cultural heritage                       | 56.5                | 42.0            | 6.3          | 104.8          |
| <i>Total</i>                            | 298.0               | 663.1           | 385.2        | 1 346.3        |
| Broadcasting and film                   |                     |                 |              |                |
| Radio and television broadcasting       | 805.0               | 0.2             | 0.5          | 805.6          |
| Film and video                          | 77.2                | 29.6            | 0.1          | 106.9          |
| Multimedia                              | 1.8                 | n.a.            | n.a.         | 1.8            |
| <i>Total</i>                            | 884.0               | 29.7            | 0.6          | 914.2          |
| Recreation and culture n.e.c.           |                     |                 |              |                |
| Administration of culture               | 28.9                | 20.1            | 17.5         | 66.5           |
| Community cultural activities           | 34.0                | 13.0            | 10.2         | 57.2           |
| Other culture n.e.c.                    | 22.1                | 6.8             | 7.4          | 36.3           |
| <i>Total</i>                            | 84.9                | 39.9            | 35.1         | 159.9          |
| <b>Total</b>                            | <b>1 372.2</b>      | <b>1 217.6</b>  | <b>605.2</b> | <b>3 195.0</b> |

Source: *Cultural Funding in Australia 1995–96* (4183.0).

## Sport and recreation

Australia is recognised internationally as a nation involved in sport. At the elite level, Australian athletes are among the best in the world in a number of disciplines, with a reputation reinforced through regular world-class performances on the international scene. Apart from the elite level, Australians in general have the health, opportunity and facilities available to participate in a wide range of sport and physical activities. This participation is encouraged in the formative school years, where physical education programs introduce students to sport and physical activity at an early age. At local level the club structure enables participants to enjoy both competitive sport and non-competitive active recreation.

The media play a significant part in fostering interest in competitive and spectator sport, with significant time and space devoted to these

fields by television, newspaper and radio. The business community also plays a significant part in fostering community support, through sponsorship.

Governments at all levels support the sport and recreation industry through the provision of facilities. The incentive for government support is the long established link between participation in physical activity and health. Active recreation is encouraged through the use of walking and cycling paths, national parks and reserves, swimming pools, beaches and similar facilities.

For many years after Federation the Commonwealth Government had little to do with the promotion of recreation activities and sporting development and participation, but this has changed in more recent years with a much stronger focus on the building of facilities and the training and development of athletes for international competition. At State and



particularly at local government level, considerable funding is devoted to the provision of facilities for participation in recreational activities by the general public.

The Sport and Recreation Ministers Council provides the major mechanism for liaison between the Commonwealth Government and State/Territory Governments on matters concerned with sport and recreation in Australia. The Council is a forum for consultation and cooperation between the respective governments, its membership comprising ministers with prime responsibility for sport and recreation.

The Australian Sports Commission is responsible for planning and coordinating delivery of the Commonwealth Government's sports program. The Commission's mission is 'To enrich the lives of all Australians through sport' and its dual objectives are 'Increased participation in sport and sports activities by Australians' and 'Excellence in sports performance by Australians'.

The Australian Institute of Sport (AIS) is responsible for developing elite sport on a national basis with a particular focus on success at the Olympic Games and world championships. For the purposes of Elite Sports Development, it integrates sport management activities and funding as well as athlete welfare and the implementation of the technical requirements for sporting success. The AIS administers the Olympic Athlete Program and Sports Assistance Scheme and is responsible for managing 32 AIS scholarship sports programs across 24 sports. The AIS delivers services nationally in association with State institutes and academies of sport and national sporting organisations.

The AIS offers about 600 scholarships annually. Centralised programs are offered by the following sports at the locations shown:

Canberra — archery, artistic gymnastics, basketball, mountain bike, netball, road cycling, rowing, shooting, soccer (men), swimming, track and field, volleyball, water polo (men) and wrestling;

Brisbane — diving and squash;

Adelaide — cricket (men), track cycling, and beach volleyball;

Perth — hockey

Melbourne — golf and tennis;

Gold Coast — sprint canoeing; and

Mount Buller — skiing.

Rugby union, softball (women) and water polo (women) are decentralised programs, in that their athletes are not all located in one centre but in various places across Australia. A number of scholarships are offered Australia-wide in a range of sports for athletes with disabilities who are training to compete at international level.

The AIS also administers the National Sports Program, which offers the use of AIS facilities, resources and expertise for the squads or teams of national sporting organisations.

The Sports Commission is responsible for the development and administration of participation programs for specific target populations including coaches, volunteers, women, indigenous Australians and officials. The Sports Commission also operates the National Sport Information Centre, which is Australia's premier information resource centre for sport.

### **Government funding for recreation and sport**

Total net (consolidated) outlays by the three levels of government (Commonwealth, State/Territories and local) on recreation in 1995–96 was \$2,374m. Most expenditure was by general government (\$2,115m, compared with \$326m by public trading enterprises). Of the general government expenditure (before consolidation between sectors) the Commonwealth Government outlay was \$265m, State \$909m and local \$1,030m. Of general government expenditure, current outlays were far more significant than capital outlays (\$1,671m compared with \$444m).

The Commonwealth Government provided \$84m in 1996–97 for the Australian Sports Commission's program and administration. This figure included \$20m under the Olympic Athlete Program, which is designed to prepare Australia's athletes for the Sydney Olympic and Paralympic Games. During 1997 funding was provided to 112 organisations.

### **Sport, recreation and gambling industries**

At the end of June 1995 there were 15,383 businesses in the sport, recreation and gambling industries, according to a survey conducted by the ABS. These businesses employed nearly a quarter of a million people and generated income of almost \$30,000m.



**12.30 SPORT, RECREATION AND GAMBLING INDUSTRIES, Key Aggregates — 1994–95**

|                                      | Number of businesses(a) | Total employment(a) | Total income    |
|--------------------------------------|-------------------------|---------------------|-----------------|
| Industry                             | no.                     | no.                 | \$m             |
| Horse and dog racing                 | 898                     | 14 118              | 789.1           |
| Sports grounds and facilities n.e.c. | 1 581                   | 21 563              | 796.3           |
| Sports and services to sports n.e.c. | 2 588                   | 22 732              | 931.6           |
| Lotteries                            | 178                     | 2 006               | 4 134.4         |
| Casinos                              | 14                      | 15 837              | 1 650.5         |
| Gambling services n.e.c.             | 1 849                   | 14 219              | 9 726.3         |
| Pubs, taverns and bars               | 4 325                   | 71 437              | 6 390.1         |
| Clubs (hospitality)                  | 3 284                   | 62 536              | 4 729.4         |
| Other recreation services            | 666                     | 10 138              | 610.1           |
| <b>Total</b>                         | <b>15 383</b>           | <b>234 586</b>      | <b>29 757.8</b> |

(a) At 30 June 1995.

Source: *Sport, Recreation and Gambling, Australia, 1994–95, Preliminary* (8692.0).

The survey covered employing businesses in a variety of industries associated with sport, recreation and gambling activities. The main results are shown in table 12.30.

There were 5,067 businesses in the sports industries. These businesses employed 58,413 persons and generated \$2,517.0m in income. There were 112,877 unpaid volunteers, representing 66% of persons working in sports industries.

There were 2,041 businesses in the gambling industries. These businesses employed 32,062 persons and received \$15,511.1m in income, the major source of income (97%) being the takings and commissions from gambling. Total expenses for the gambling industry were \$14,224.8m, with 70% of that amount being gambling prize moneys and payouts.

There were 7,609 businesses in the hospitality clubs and the pubs, taverns and bars industries. These businesses employed 133,973 persons and received a total income of \$11,119.5m.

Of the 119,346 gaming/poker machines in operation in June 1995, 70% were in the hospitality clubs industry, 23% were in pubs, taverns and bars, 6% were in casinos, and the remaining 1% were in other facilities.

Other recreation services, including amusement parks or arcades, sideshows, circuses and agricultural shows, accounted for another 666 businesses. These businesses employed 10,138 persons and a further 3,518 volunteers.

At 30 June 1996, employment in casinos was 18,490 persons, an increase of 17%. Income for 1995–96 was \$2,230.7m, an increase of 35%.

There were 8,225 gaming/poker machines throughout the country and 993 gaming tables located in casinos at 30 June 1996.

### Involvement in sport

In March 1997, an ABS survey collected information about the involvement of persons aged 15 and over in sport during the previous 12 months, updating the data collected in March 1993. Involvement in sport was defined to include both paid and unpaid participation in playing and non-playing capacities. Spectator involvement in sport was excluded.

The survey found that 4.7 million people, 32.4% of the Australian population aged 15 years and over, were involved in sport, compared with 33.1% in March 1993. There were three million people involved in sport as players, 550,000 as non-players and 1,100,000 as both players and non-players. More men than women were involved as players and as non-players.

Overall, 35.7% of males played sport compared with 21.5% of females, and at all ages a greater proportion of males than females played sport. The higher the age group the lower was the percentage player participation (table 12.31).

For those involved in sport solely as non-players, the 35 to 44 years age group had the highest participation rate (7.8% for males, 8.8% for females). Their most common activities were as coaches or committee members.

Only 328,500 people, 7.0% of the total number of people involved in sport, received some payment for their involvement, compared with 4.7% in 1993. In 1997, 142,600 people received some payment for playing, compared with 57,000 people in 1993.

**12.31 PERSONS INVOLVED IN SPORT, March 1997**

|                   | Males          |             | Females        |             |
|-------------------|----------------|-------------|----------------|-------------|
|                   | All players(a) | Non-players | All players(a) | Non-players |
| Age group (years) | %              | %           | %              | %           |
| 15–24             | 57.9           | 1.3         | 40.0           | 1.4         |
| 25–34             | 42.7           | 2.6         | 25.7           | 2.8         |
| 35–44             | 32.8           | 7.8         | 17.6           | 8.8         |
| 45–54             | 25.2           | 6.7         | 14.3           | 5.5         |
| 55–64             | 23.2           | 3.9         | 14.8           | 2.0         |
| 65+               | 22.2           | 1.5         | 12.9           | 0.3         |
| <b>Total</b>      | <b>35.7</b>    | <b>4.1</b>  | <b>21.5</b>    | <b>3.6</b>  |

(a) All players includes those players who have some non-playing involvement.

Source: *Involvement in Sport, Australia, March 1997* (6285.0).

**12.32 PAID AND UNPAID INVOLVEMENTS IN SPORT, March 1997(a)**

|                                | Involvements |                |                | Participation rate |
|--------------------------------|--------------|----------------|----------------|--------------------|
|                                | Paid         | Unpaid         | Total          |                    |
| Type of involvement            | '000         | '000           | '000           | %                  |
| Playing involvements           | 142.6        | 3 972.6        | 4 115.2        | 28.5               |
| Non-playing involvements       |              |                |                |                    |
| Coach/instructor/teacher       | 100.5        | 527.8          | 628.3          | 4.4                |
| Referee/umpire                 | 75.2         | 381.6          | 456.8          | 3.2                |
| Committee member               | 13.3         | 592.5          | 605.8          | 4.2                |
| Administrator                  | 28.5         | 237.9          | 266.5          | 1.8                |
| Other involvements             | 28.1         | 541.8          | 569.9          | 3.9                |
| Total non-playing involvements | 245.6        | 2 281.6        | 2 527.3        | ..                 |
| <b>Total involvements</b>      | <b>388.2</b> | <b>6 254.2</b> | <b>6 642.5</b> | <b>..</b>          |

(a) Persons with several types of involvement were counted against each type of involvement.

Source: *Involvement in Sport, Australia, March 1997* (6285.0).

## Participation in sport and recreation

Participation in organised and social sporting activities is measured by the ABS Population Survey Monitor, the first national survey by the ABS to determine participation in individual sports, and frequency of participation. The survey showed that in 1995–96 nearly one-third of all people aged 15 and over participated in a sport or physical activity which was organised by a club or association. The results were released in *Sport and Recreation Participation, Australia* (4177.0). Detailed information from this survey is included in the article at the end of this chapter.

## Sports attendance

A survey of sports attendance conducted by the ABS in March 1995 obtained data about the number of people who attended a sporting event as a spectator at least once in the previous

12 months. The survey excluded those under 15 years of age and attendance at junior and school sport.

The survey found that 6.2 million people, 44.3% of the population aged 15 or more, went to a sporting event at least once during the year. Males were the predominant spectators, 3.6 million (51.5% of males) compared with 2.7 million females (37.4% of all females).

Australian rules football attracted the most people across Australia to attend at least one game in the 12 month period. Almost two million (1,874,200) people attended at least one game; of these people nearly 30% (553,300) attended ten games or more.

Horse racing (1.7 million), rugby league (1.5 million) and cricket (1.2 million) follow Australian rules as the sports most attended at least once.

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# Participation in sport and physical activities

## Introduction

Sport in Australia enjoys a high profile, especially at the elite level. The extensive media coverage of sporting events serves to heighten public awareness of sports and of top sportspeople. With the benefits of higher levels of physical activity becoming more widely recognised, participation in sport by all Australians at all levels is seen as increasingly important. The Federal Minister for Sport, Territories and Local Government recently launched a new initiative aimed at making Australians fitter and healthier. The program, Active Australia — a National Participation Framework, aims to have all Australians actively involved in sport, community recreation, fitness and/or outdoor recreation. The focus is on promoting a healthy and active lifestyle, and providing access to sport and recreation facilities and services. The excitement surrounding the preparation for the Sydney Olympics in the year 2000 has provided added stimulus for the development of sport and physical activity policy and participation in Australia.

*Participation in Sport and Physical Activities, Australia, 1995–96* (4177.0) provides national data on participation in sports and physical activities by Australians five years of age and over. These data will provide benchmarks to assist in measuring the impact of the Olympics on participation in sport at all levels.

Information for the publication was collected by the Population Survey Monitor (PSM). A total of 22,325 people were interviewed throughout the year about their participation in sport and physical activities, including both organised and social involvement. Organised sports and physical activities were those organised through

a club, association or school (outside of school hours). The club or association need not have been sporting, but could have included e.g. a social club, church group, old scholars' association or aerobics at the local gymnasium. For organised and children's activities, respondents were asked about the 12 months prior to the interview. In contrast, details of social activities, that is, sport and physical activities not organised by a club or association, were restricted to participation by persons aged 18 years and over during the preceding two weeks.

## Participation by age and sex

During the 12 months ended June 1996, over 5.8 million people (35.5% of the population aged five years and over) participated in organised sport and physical activities (see table S4.1).

The highest participation rate was exhibited by children aged 9–11 years (71.0%), with the rate declining for each successive age group. The largest falls occurred between 15–19 year olds and 20–24 year olds (14.0 percentage points) and between 12–14 year olds and 15–19 year olds (12.5 percentage points). The diminishing rates in these age groups coincide with the ages at which people leave school and the years when their interests, preferences and commitments may be changing.

Males had a higher participation rate than females in every age group. The difference was most evident in the 12–14 and 15–19 year age groups where the respective rates for males were 11.2 and 11.3 percentage points higher than those for females.

**S4.1 PARTICIPATION IN ORGANISED SPORT AND PHYSICAL ACTIVITIES, By Age Group**

| Age group (years) | Males          |                    | Females        |                    | Persons        |                    |
|-------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|
|                   | Number         | Participation rate | Number         | Participation rate | Number         | Participation rate |
|                   | '000           | %                  | '000           | %                  | '000           | %                  |
| 5–14              |                |                    |                |                    |                |                    |
| 5–8               | 274.1          | 51.5               | 230.4          | 46.8               | 504.5          | 49.2               |
| 9–11              | 306.8          | 74.3               | 249.8          | 67.2               | 556.7          | 71.0               |
| 12–14             | 278.7          | 74.1               | 245.4          | 62.9               | 524.1          | 68.4               |
| Total             | 859.6          | 65.0               | 725.7          | 57.8               | 1 585.2        | 61.5               |
| 15 and over       |                |                    |                |                    |                |                    |
| 15–19             | 387.0          | 61.4               | 299.7          | 50.1               | 686.8          | 55.9               |
| 20–24             | 318.0          | 46.3               | 251.0          | 37.3               | 569.0          | 41.9               |
| 25–34             | 562.8          | 41.1               | 466.9          | 33.5               | 1 029.8        | 37.3               |
| 35–44             | 407.3          | 30.3               | 344.3          | 25.0               | 751.6          | 27.6               |
| 45–54             | 288.1          | 25.2               | 237.7          | 21.2               | 525.8          | 23.2               |
| 55–64             | 168.2          | 22.4               | 148.5          | 20.0               | 316.7          | 21.2               |
| 65 and over       | 182.7          | 20.7               | 161.8          | 15.3               | 344.5          | 17.7               |
| Total             | 2 314.2        | 34.0               | 1 910.0        | 27.4               | 4 224.2        | 30.7               |
| <b>Total</b>      | <b>3 173.8</b> | <b>39.0</b>        | <b>2 635.7</b> | <b>32.1</b>        | <b>5 809.4</b> | <b>35.5</b>        |

Source: ABS unpublished data, Population Survey Monitor, 1995–96.

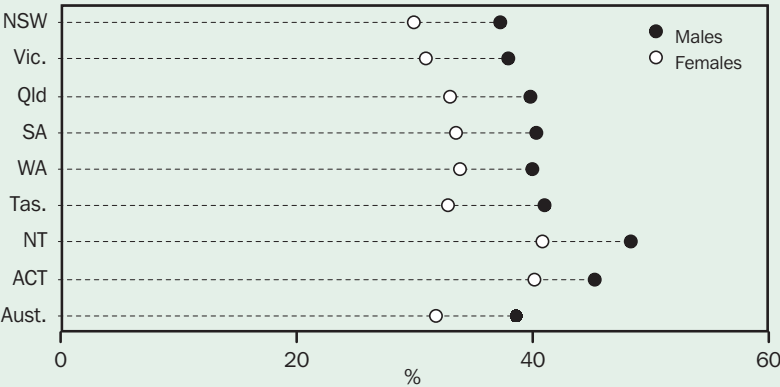
### Participation by State and Territory

Participation in organised sport and physical activities varied across the States and Territories. The Northern Territory and the Australian Capital Territory had the highest participation rates (44.9% and 43.0% respectively), substantially higher than those of any of the States. South Australia, Western Australia and Tasmania had the highest rates among the States (each 37.2%) while the lowest was recorded for

New South Wales (33.9%). The higher rates in the Northern Territory and the Australian Capital Territory could be due to these areas having comparatively lower proportions of aged people as well as higher levels of income.

Within each State or Territory, the participation rate for males was higher than for females. However, as graph S4.2 shows, the difference in the rates was least in the Australian Capital Territory (5.2 percentage points) and greatest in Tasmania (8.1 percentage points).

**S4.2 PARTICIPATION IN ORGANISED SPORT AND PHYSICAL ACTIVITIES(a), By State/Territory**



(a) Persons aged 15 years and over.  
Source: Unpublished data, Population Survey Monitor, 1995–96

## Organised sports and physical activities of people aged 15 years and over

The participation rate in sport and physical activities that had been organised through clubs, associations and other organisations conducting sport and active recreation activities was found to be 30.7% in 1995–96, 34.0% for males and 27.4% for females (table S4.3).

The most popular organised sport and physical recreation activity undertaken by Australians during 1995–96 was aerobics, in which almost 660,000 people, 4.8% of persons aged 15 years and over, were involved (table S4.3). Participation in this activity was predominantly by females, who accounted for over 85% (566,300) of all those involved. The next most popular organised activity was playing golf, with just under 445,000 people participating during

the year. Of this number, 349,400 were males (78.6%) and 95,300 (21.4%) were females. Other popular organised sport and physical activities included tennis (362,000 people), netball (328,600), lawn bowls (296,400) and swimming (281,400).

There were significant differences between the numbers of males and females participating in many of the activities, as shown for aerobics and golf. Others where the difference between male and female participation was large were netball, which was the second most popular sport played by females, and cricket.

Apart from aerobics and netball, other highly popular organised sport and physical activities undertaken by females included tennis and swimming. Golf was the most popular sporting activity among males, followed by cricket, lawn bowls and tennis.

**S4.3 MOST POPULAR SPORTS AND PHYSICAL ACTIVITIES(a), Persons Aged 15 Years and Over**

|                                | Males          |                    | Females        |                    | Persons        |                    |
|--------------------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|
|                                | Number         | Participation rate | Number         | Participation rate | Number         | Participation rate |
|                                | '000           | %                  | '000           | %                  | '000           | %                  |
| Sport and physical activities  |                |                    |                |                    |                |                    |
| Aerobics                       | 93.6           | 1.4                | 566.3          | 8.1                | 659.9          | 4.8                |
| Golf                           | 349.4          | 5.1                | 95.3           | 1.4                | 444.7          | 3.2                |
| Tennis                         | 154.7          | 2.3                | 207.2          | 3.0                | 362.0          | 2.6                |
| Netball                        | 41.6           | 0.6                | 287.0          | 4.1                | 328.6          | 2.4                |
| Lawn bowls                     | 180.4          | 2.6                | 116.1          | 1.7                | 296.4          | 2.2                |
| Swimming                       | 127.6          | 1.9                | 153.8          | 2.2                | 281.4          | 2.0                |
| Basketball                     | 146.3          | 2.1                | 93.9           | 1.3                | 240.2          | 1.7                |
| Martial arts                   | 122.9          | 1.8                | 91.3           | 1.3                | 214.2          | 1.6                |
| Cricket (outdoor)              | 191.1          | 2.8                | *5.3           | *0.1               | 196.4          | 1.4                |
| Tenpin bowling                 | 79.7           | 1.2                | 111.1          | 1.6                | 190.9          | 1.4                |
| <b>Total all activities(a)</b> | <b>2 314.2</b> | <b>34.0</b>        | <b>1 910.0</b> | <b>27.4</b>        | <b>4 224.2</b> | <b>30.7</b>        |

(a) Includes activities not listed.

Source: *Participation in Sport and Physical Activities, 1995–96 (4177.0)*.

## Children's organised sport and physical activities

Almost 1.6 million children aged 5–14 years (61.5% of all children in this age group) participated in organised sport and physical activities, either with a club or in school organised activities conducted outside school hours (table S4.4). The most popular sport or activity for 5–14 year olds was swimming, which had 338,800 participants in this age range during 1995–96. This was followed by basketball (300,100 participants), netball (263,900 participants) and soccer (245,000 participants).

For girls, netball and swimming were by far the most popular sports or activities, with participation rates of 20.5% and 15.0% respectively. Next most

popular were basketball (8.3%) and tennis (7.7%). Boys had a more even distribution of interests, with soccer being the most popular sport (17.0%), followed by basketball (14.9%), cricket (11.5%) and swimming (11.4%).

## Expenditure on sport and physical activities

Annual expenditure on organised sport and physical activities by the 4.2m participants 15 years of age and over totalled \$2,755m, an average cost of \$652 for each participant (table S4.5). The aggregate amount included almost \$550m in membership fees, \$986m in transport and weekly participation charges and just over \$900m on clothing and equipment.

**S4.4 MOST POPULAR SPORTS AND PHYSICAL ACTIVITIES, 5–14 Year Olds**

|                                | Males        |               | Females      |               | Total children |               |
|--------------------------------|--------------|---------------|--------------|---------------|----------------|---------------|
|                                | Number       | Participation | Number       | Participation | Number         | Participation |
|                                | '000         | %             | '000         | %             | '000           | %             |
| Sport and physical activity    |              |               |              |               |                |               |
| Swimming                       | 150.0        | 11.4          | 188.8        | 15.0          | 338.8          | 13.1          |
| Basketball                     | 196.3        | 14.9          | 103.8        | 8.3           | 300.1          | 11.6          |
| Netball                        | *7.2         | *0.5          | 256.7        | 20.5          | 263.9          | 10.2          |
| Soccer (outdoor)               | 224.8        | 17.0          | 20.1         | 1.6           | 245.0          | 9.5           |
| Tennis                         | 101.1        | 7.7           | 96.6         | 7.7           | 197.8          | 7.7           |
| Cricket (outdoor)              | 151.4        | 11.5          | 10.2         | 0.8           | 161.6          | 6.3           |
| Australian Rules football      | 144.8        | 11.0          | *4.4         | *0.3          | 149.2          | 5.8           |
| Athletics, track and field     | 76.5         | 5.8           | 70.9         | 5.6           | 147.4          | 5.7           |
| Martial arts                   | 76.8         | 5.8           | 32.6         | 2.6           | 109.4          | 4.2           |
| Dancing                        | *9.3         | *0.7          | 95.4         | 7.6           | 104.7          | 4.1           |
| <b>Total all activities(a)</b> | <b>859.6</b> | <b>65.0</b>   | <b>725.7</b> | <b>57.8</b>   | <b>1 585.2</b> | <b>61.5</b>   |

(a) Includes activities not listed.

Source: *Participation in Sport and Physical Activities, 1995–96* (4177.0).

**S4.5 EXPENDITURE, Selected Organised Sport and Physical Activities(a)**

|                                | Membership   | Transport and weekly fees | Clothing and equipment | Other        | Total          | Average per participant |
|--------------------------------|--------------|---------------------------|------------------------|--------------|----------------|-------------------------|
|                                | \$m          | \$m                       | \$m                    | \$m          | \$m            | \$                      |
| Sport and physical activity    |              |                           |                        |              |                |                         |
| Aerobics                       | 115.8        | 69.7                      | 55.1                   | 4.4          | 245.1          | 371                     |
| Golf                           | 131.8        | 114.6                     | 108.7                  | 10.6         | 365.7          | 822                     |
| Tennis                         | 22.1         | 47.1                      | 34.6                   | 7.2          | 111.0          | 307                     |
| Netball                        | 13.5         | 42.6                      | 16.5                   | 4.1          | 76.7           | 233                     |
| Lawn bowls                     | 16.3         | 56.7                      | 33.2                   | 2.9          | 109.1          | 368                     |
| Swimming                       | 13.7         | 28.0                      | 14.9                   | 6.6          | 63.1           | 224                     |
| Basketball                     | 11.8         | 36.7                      | 18.4                   | 9.8          | 76.6           | 319                     |
| Martial arts                   | 23.0         | 36.2                      | 15.7                   | 4.0          | 78.8           | 368                     |
| Cricket (outdoor)              | 13.0         | 16.4                      | 22.9                   | 2.5          | 54.8           | 279                     |
| Tenpin bowling                 | 5.1          | 63.8                      | 8.7                    | 3.1          | 80.6           | 422                     |
| <b>Total all activities(b)</b> | <b>549.6</b> | <b>986.3</b>              | <b>906.7</b>           | <b>312.6</b> | <b>2 755.1</b> | <b>652</b>              |

(a) Persons 15 years of age and over. (b) Includes activities not listed.

Source: *Participation in Sport and Physical Activities, Australia, 1995–96* (4177.0).



Golf was by far the most expensive of the 10 most popular sports or physical activities. Golfers each spent an average of \$822 on their sport, while annual outlays by participants in the other nine sports/physical activities ranged from \$224 for swimming to \$422 for tenpin bowling.

The sports or physical activities found to incur the highest annual costs were horse riding (\$1,833), motor sports (\$1,653) and air sports (e.g. parachuting, hang-gliding and model aircraft flying) (\$1,301). At the lower end of the scale, the average cost met by people who participated in carpet bowls during 1995–96 was a modest \$90 for the year. Other low cost organised pursuits were indoor soccer (\$154), darts (\$160) and walking (\$171).

## Social participation

In addition to participating in an organised sport or physical activity, many people also participate in sports such as tennis, cycling, weightlifting, swimming and fishing on a social basis. Table S4.6 shows the number of people who participated in such activities during the two weeks prior to being surveyed, for each of the four surveys conducted during 1995–96. Swimming was the most popular activity in the warmer months (1,319,500 in November and 1,652,000 in February), while cycling was the most popular activity in cooler weather (522,200 in August and 579,300 in May).

Given that social participants were measured as people aged 18 years and over who had participated during the previous two weeks only, it is likely that the total number who were involved in social sport during 1995–96 is understated. Similarly, the estimate of about \$1,000m for annual expenditure on social sport should be regarded as a minimum.

## Summary

This article has briefly outlined the main findings of an ABS survey regarding participation in sport and physical activities in 1995–96.

With 5.8m people aged five years and over participating in organised sport and physical activities during 1995–96, and \$2,755m spent by participants 15 years and over, and another \$1,000m spent on social participation, the popularity and economic significance of sport and physical activities in Australia are clear.

The survey found that participation in organised sport and physical activities was highest among the younger age groups, with participation rates steadily declining with age. Males had a higher participation rate than females in all age groups, while the Northern Territory and the Australian Capital Territory had higher participation rates than any of the States.

For further details see the ABS publication *Participation in Sport and Physical Activities, Australia 1995–96* (4177.0).

**S4.6 PARTICIPANTS, Selected Social Sport and Physical Activities(a)**

|                               | Aug 1995 | Nov 1995 | Feb 1996 | May 1996 |
|-------------------------------|----------|----------|----------|----------|
|                               | '000     | '000     | '000     | '000     |
| Sport and physical activities |          |          |          |          |
| Aerobics                      | 340.1    | 409.0    | 413.8    | 361.1    |
| Cycling                       | 522.2    | 656.1    | 643.8    | 579.3    |
| Fishing                       | 463.2    | 660.2    | 835.0    | 490.2    |
| Golf                          | 350.4    | 367.7    | 412.4    | 366.2    |
| Horse riding                  | 131.3    | 163.0    | 115.9    | 69.5     |
| Ice/snow sports               | 200.3    | (b)      | (b)      | (b)      |
| Squash/racquet ball           | 89.4     | 172.8    | 108.8    | 151.7    |
| Surf sports                   | 118.7    | 241.4    | 192.0    | 79.2     |
| Swimming                      | 474.8    | 1 319.5  | 1 652.0  | 524.8    |
| Tenpin bowling                | 127.8    | 70.4     | 123.8    | 91.7     |
| Tennis                        | 221.8    | 311.5    | 429.0    | 211.1    |
| Water-skiing/powerboating     | (b)      | 129.7    | 178.2    | 91.3     |
| Weight-lifting                | 500.0    | 763.9    | 586.4    | 515.3    |

(a) Persons aged 18 years and over in the two weeks before each survey. (b) Subject to relative standard error greater than 50%.

Source: *Participation in Sport and Physical Activities, 1995–96, Australia*, (4177.0).



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## Introduction

Australia's economic development has been one of contrast and change. In the early years of settlement, between 1788 and 1820, there was little scope for industrial or commercial enterprises. The government, as both main producer and main consumer, established workshops in order to produce the basic necessities of life — flour, salt, bread, candles, leather and leather articles, blacksmith's products, tools and domestic items.

Between 1820 and 1850 the pastoral industry led Australia's economic development and by 1850 was supplying well over 50% of the British market for imported wool. The growth in the wool industry brought great advances in the rest of the economy, with local manufacturing industries being established in response to new market opportunities. Gold surpassed wool as Australia's major export earner throughout the 1850s and 1860s, resulting in a rapid expansion of banking and commerce. Increased public works activity during the 1870s played an important role in encouraging expansion in manufacturing.

From 1901 to 1930 manufacturing expanded further, with Federation, the elimination of customs barriers between States and World War I each providing an impetus. When World War II broke out in 1939 the Australian manufacturing sector was sufficiently developed and diversified to respond to the demand for war materials and equipment. Key industries expanded and new ones developed rapidly to produce munitions, ships, aircraft, new kinds of equipment and machinery, chemicals, textiles and so on. After World War II all sectors of the economy experienced growth. The onset of the oil price rises in 1973–74 led the world into recession, and 'stagflation' (inflation coupled with slower growth in Gross Domestic Product (GDP)) affected all sectors of the economy. The modest employment growth between 1968 and 1979 was dominated by the service sector.

The 1980s and 1990s have seen a decline in the proportionate contribution to GDP from goods-producing industries and a rise in the contribution from service industries. The falling contribution from goods-producing industries is largely the result of a decline in Manufacturing's share of GDP. Of the goods-producing industries, Mining, Manufacturing and Electricity, gas and water have also experienced declining employment.

The future development and performance of Australian industry will depend on a wide range of factors, some internal to Australia, some external, and technological developments.

This chapter presents an overview of the structure and performance of the main industrial sectors of the Australian economy, and their relative contributions to overall economic activity in terms of employment, production and investment. Statistics are presented at a broad industry level, generally equating to the Division level in the *Australian and New Zealand Standard Industrial Classification* (ANZSIC) (1292.0).

While the statistics presented in this chapter provide the basis for comparisons across industries, care should be taken when making comparisons with data in the industry-specific chapters. Differences in the frequency, scope, statistical units and methodologies of the various ABS collections used to compile the statistics will affect the degree to which comparisons can be made.

Tables 13.1 and 13.3 show each industry's contribution to production in the economy. The remaining tables provide more detailed indicators of economic activity by industry, but have some limitations in their coverage of economic entities and hence of economic activity. Tables 13.4 to 13.7 and 13.10 to 13.12 include private employing and public trading businesses but exclude non-employing businesses and entities in the general government sector. On the other hand, tables 13.8, 13.9 and 13.14 include private employing businesses but exclude public trading businesses.

## Industry contribution to Gross Domestic Product

One measure of the changing importance of an industry is its contribution to GDP as presented in the National Accounts. Table 13.1, graph 13.2 and table 13.3 present three different views of the contribution to GDP by each industry. Table 13.1 shows the percentage contribution by each industry in current prices in the years 1983–84, 1993–94, 1994–95 and 1995–96. Graph 13.2 shows these at a much broader level. Table 13.3 shows the contributions in constant (1989–90) prices.

The steady decline in the contribution to GDP from goods-producing industries can be seen in table 13.1 and graph 13.2. Between 1983–84 and

1995–96 the contribution to GDP from goods-producing industries (Agriculture, forestry and fishing, Mining, Manufacturing, Electricity, gas and water, and Construction) fell nine percentage points, from 39.5% to 30.5%. The contribution grew from each of the other three industry groups shown in graph 13.2.

Over the same time frame, the contribution to GDP from the distribution industries (Wholesale trade, Retail trade, Accommodation, cafes and restaurants and Transport and storage) has risen by just over two and a half percentage points, from 22.8% to 25.4%, while the contribution from the Finance and insurance and Property and business services group has risen by just under five percentage points, from 10.8% to 15.7%. Other service industries, as a group, rose from 20.0% to 21.0% after falling initially to 19.1% in 1989–90. Other service industries include Communication services, Government

administration and defence, Education, Health and community services, Cultural and recreational services, and Personal and other services.

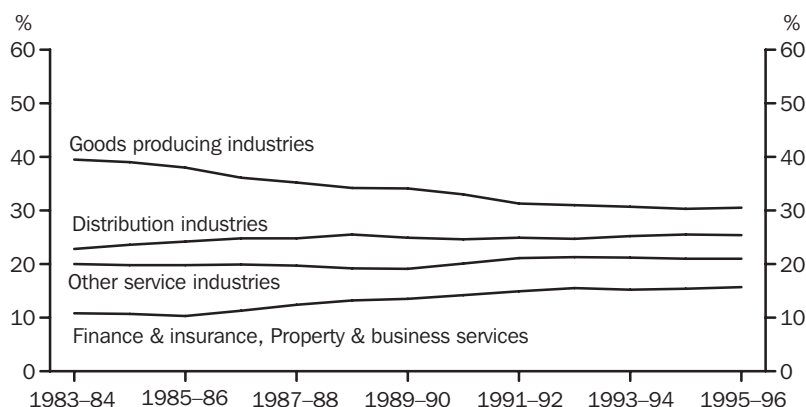
The decline in the proportionate contribution to GDP from goods-producing industries is largely the result of a decline in Manufacturing's share of GDP (table 13.1), from 17.6% in 1983–84 to 14.3% in 1995–96. Despite this decline, Manufacturing still remains the largest industry sector in Australia in gross product terms. Other industries with large changes in their contribution to GDP from 1983–84 to 1995–96 include Mining, which declined from 6.6% to 4.0%, Finance and insurance, which increased from 4.7% to 7.3%, Property and business services, which increased from 6.1% to 8.4%, and Wholesale trade, which increased from 8.8% to 10.9%.

### 13.1 GROSS PRODUCT, By Industry — Proportion of GDP at Current Prices

|                                       | 1983–84      | 1993–94      | 1994–95      | 1995–96      |
|---------------------------------------|--------------|--------------|--------------|--------------|
| Industry                              | %            | %            | %            | %            |
| Agriculture, forestry and fishing     | 4.9          | 3.2          | 2.8          | 3.4          |
| Mining                                | 6.6          | 3.8          | 3.8          | 4.0          |
| Manufacturing                         | 17.6         | 14.5         | 14.5         | 14.3         |
| Electricity, gas and water            | 3.8          | 3.2          | 3.0          | 2.9          |
| Construction                          | 6.6          | 6.0          | 6.2          | 5.9          |
| Wholesale trade                       | 8.8          | 10.7         | 10.7         | 10.9         |
| Retail trade                          | 6.7          | 7.4          | 7.2          | 7.2          |
| Accommodation, cafes and restaurants  | 1.6          | 2.0          | 2.2          | 2.1          |
| Transport and storage                 | 5.7          | 5.2          | 5.4          | 5.1          |
| Communication services                | 2.2          | 2.6          | 2.7          | 2.7          |
| Finance and insurance                 | 4.7          | 7.5          | 7.1          | 7.3          |
| Property and business services        | 6.1          | 7.7          | 8.3          | 8.4          |
| Government administration and defence | 4.2          | 3.8          | 3.7          | 3.7          |
| Education                             | 4.8          | 5.0          | 4.8          | 4.6          |
| Health and community services         | 5.1          | 5.6          | 5.5          | 5.6          |
| Cultural and recreational services    | 1.9          | 2.2          | 2.3          | 2.3          |
| Personal and other services           | 1.7          | 2.0          | 2.1          | 2.1          |
| Ownership of dwellings                | 8.3          | 9.7          | 9.5          | 9.5          |
| Import duties                         | 1.2          | 0.8          | 0.8          | 0.6          |
| Less imputed bank service charge      | 2.6          | 2.9          | 2.6          | 2.8          |
| <b>All industries (GDP(I))</b>        | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0).

## 13.2 CONTRIBUTION TO GDP, By Broad Industry



Source: Australian National Accounts: National Income, Expenditure and Product (5204.0)

While proportions of GDP, as shown in table 13.1, are best calculated using data valued in current prices, trends in total values are best assessed in constant price terms, as in table 13.3.

GDP at average 1989–90 prices increased by 49.1% between 1983–84 and 1995–96, with an average annual rate of growth of 3.4%. Industries

contributing significantly to the increase were Communication services, Property and business services, Mining, and Transport and storage. Communication services increased by 194.7% over this time frame, Property and business services by 80.3%, Mining by 76.5%, and Transport and storage by 75.8%.

## 13.3 GROSS PRODUCT, By Industry — Average 1989–90 Prices

|                                       | 1983–84           | 1993–94        | 1994–95        | 1995–96        | Average annual rate of growth 1974–75 to 1995–96 |
|---------------------------------------|-------------------|----------------|----------------|----------------|--------------------------------------------------|
|                                       | \$m               | \$m            | \$m            | \$m            | %                                                |
| Agriculture, forestry and fishing     | 14 087            | 16 280         | 13 068         | 15 873         | 1.4                                              |
| Mining                                | 10 574            | 17 091         | 17 813         | 18 668         | 5.0                                              |
| Manufacturing                         | 46 404            | 57 191         | 58 605         | 59 184         | 2.1                                              |
| Electricity, gas and water            | 9 376             | 13 289         | 13 680         | 13 707         | 3.2                                              |
| Construction                          | 19 858            | 25 244         | 26 826         | 27 147         | 2.8                                              |
| Wholesale trade                       | 30 650            | 36 746         | 41 010         | 43 890         | 3.2                                              |
| Retail trade                          | 22 697            | 28 373         | 29 575         | 30 657         | 2.6                                              |
| Accommodation, cafes and restaurants  | 5 344             | 7 350          | 7 978          | 8 240          | 3.7                                              |
| Transport and storage                 | 14 486            | 22 385         | 24 253         | 25 462         | 4.8                                              |
| Communication services                | 5 151             | 11 871         | 13 368         | 15 180         | 9.5                                              |
| Finance and insurance                 | 13 541            | 16 691         | 16 955         | 17 572         | 2.3                                              |
| Property and business services        | 19 023            | 30 866         | 33 102         | 34 306         | 5.1                                              |
| Government administration and defence | 10 869            | 14 214         | 14 803         | 15 393         | 3.0                                              |
| Education                             | 12 910            | 19 102         | 19 338         | 19 509         | 3.5                                              |
| Health and community services         | 14 236            | 21 455         | 21 908         | 23 303         | 4.2                                              |
| Cultural and recreational services    | 5 970             | 7 986          | 8 506          | 8 683          | 3.2                                              |
| Personal and other services           | 4 883             | 6 602          | 7 026          | 7 533          | 3.7                                              |
| Ownership of dwellings                | 28 570            | 39 059         | 40 470         | 41 905         | 3.2                                              |
| Import duties                         | 2 560             | 4 527          | 5 316          | 5 439          | 7.0                                              |
| Less imputed bank service charge      | 7 148             | 7 433          | 7 583          | 8 259          | 1.4                                              |
| <b>All industries (GDP(P))</b>        | <b>(a)283 897</b> | <b>388 889</b> | <b>406 017</b> | <b>423 392</b> | <b>3.4</b>                                       |

(a) Estimates before 1984–85 have been derived by linking estimates for earlier base years to estimates at average 1989–90 prices. Since this linking has been done separately for components and totals, additivity has not been maintained.

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0).

## Industry structure: classification, numbers and sizes of businesses

For many purposes the term 'business' is taken to mean a legal entity such as a registered company, partnership, sole proprietor, government enterprise or any other legally recognised organisation which provides goods or services. The business units about which the ABS collects and publishes information have been defined to reflect, as far as possible, the way businesses are structured and the units for which accounts are kept.

Throughout this chapter the term 'business' refers to the 'management unit'. This is defined as the highest level accounting unit in a business for which accounts are maintained, provided that the unit does not include too wide a range of activities. For the majority of businesses, the management unit coincides with the legal entity (i.e., company, partnership, trust, sole operator, etc.). In the case of large diverse businesses,

however, there may be more than one management unit, each coinciding with a division or line of business for which separate accounts are kept.

Table 13.4 provides an overview of the structure of Australian employing businesses (public and private sector) at June 1995 in terms of the number of operating businesses and the number of persons employed. Later in this chapter, table 13.12 provides a time series of employment in industries between June 1991 and 1995.

For the purpose of these statistics, large businesses are defined as management units which employ 200 or more persons or have assets worth more than \$200m.

Tables 13.4 to 13.7 show that, in 1994–95, small and medium businesses accounted for 99.6% of the total number of public trading and private employing businesses, and represented 61% of the employment, 53% of the sales, 39% of the profits and 50% of the industry gross product of these businesses.

**13.4 NUMBER OF BUSINESSES AND EMPLOYMENT(a), By Industry and Size — June 1995**

| Industry                             | Small and medium businesses |                  | Large businesses     |                  | All businesses       |                  |
|--------------------------------------|-----------------------------|------------------|----------------------|------------------|----------------------|------------------|
|                                      | Operating businesses        | Employment       | Operating businesses | Employment       | Operating businesses | Employment       |
|                                      | no.                         | no.              | no.                  | no.              | no.                  | no.              |
| Agriculture, forestry and fishing(b) | 115 000                     | 348 000          | ..                   | ..               | 115 000              | 348 000          |
| Mining                               | 2 000                       | 19 000           | 108                  | 62 000           | 3 000                | 81 000           |
| Manufacturing                        | 41 000                      | 476 000          | 689                  | 484 000          | 42 000               | 960 000          |
| Electricity, gas and water supply    | 1 000                       | 9 000            | 51                   | 64 000           | 1 000                | 73 000           |
| Construction                         | 75 000                      | 241 000          | 75                   | 48 000           | 75 000               | 289 000          |
| Wholesale trade                      | 44 000                      | 308 000          | 176                  | 105 000          | 44 000               | 413 000          |
| Retail trade                         | 106 000                     | 498 000          | 236                  | 409 000          | 106 000              | 908 000          |
| Accommodation, cafes and restaurants | 29 000                      | 284 000          | 140                  | 96 000           | 30 000               | 380 000          |
| Transport and storage                | 26 000                      | 148 000          | 119                  | 163 000          | 26 000               | 311 000          |
| Communication services               | 2 000                       | 6 000            | 7                    | 117 000          | 2 000                | 124 000          |
| Finance and insurance                | 20 000                      | 62 000           | 319                  | 222 000          | 20 000               | 284 000          |
| Property and business services       | 107 000                     | 466 000          | 250                  | 152 000          | 107 000              | 618 000          |
| Private community services(c)        | 47 000                      | 359 000          | 321                  | 174 000          | 47 000               | 534 000          |
| Cultural and recreational services   | 15 000                      | 115 000          | 71                   | 43 000           | 15 000               | 158 000          |
| Personal and other services          | 30 000                      | 124 000          | 46                   | 28 000           | 30 000               | 152 000          |
| <b>All industries</b>                | <b>660 000</b>              | <b>3 462 000</b> | <b>2 611</b>         | <b>2 170 000</b> | <b>663 000</b>       | <b>5 632 000</b> |

(a) Includes private employing and public trading businesses but excludes non-employing businesses and entities in the general government sector. (b) As separate details are not available for large businesses, all businesses are classified as small and medium businesses. (c) Includes private education, health services and community services businesses, but excludes those in the public sector.

Source: *Business Operations and Industry Performance* (8140.0).



## 13.5 SALES OF GOODS AND SERVICES(a), By Industry and Size — June 1995

| Industry                             | Small and medium businesses |           | Large businesses |           | All employing businesses |
|--------------------------------------|-----------------------------|-----------|------------------|-----------|--------------------------|
|                                      | \$m                         | %         | \$m              | %         | \$m                      |
| Agriculture, forestry and fishing(b) | 26 961                      | 100       | ..               | ..        | 26 961                   |
| Mining                               | 6 728                       | 20        | 26 452           | 80        | 33 181                   |
| Manufacturing                        | 65 594                      | 33        | 130 364          | 67        | 195 958                  |
| Electricity, gas and water supply    | 4 426                       | 16        | 24 097           | 84        | 28 522                   |
| Construction                         | 36 922                      | 77        | 11 284           | 23        | 48 206                   |
| Wholesale trade                      | 113 554                     | 67        | 55 699           | 33        | 169 252                  |
| Retail trade                         | 87 146                      | 63        | 50 726           | 37        | 137 872                  |
| Accommodation, cafes and restaurants | 19 198                      | 80        | 4 938            | 20        | 24 136                   |
| Transport and storage                | 15 630                      | 38        | 25 270           | 62        | 40 900                   |
| Communication services               | 944                         | 5         | 18 428           | 95        | 19 373                   |
| Finance and insurance                | 8 341                       | 40        | 12 739           | 60        | 21 080                   |
| Property and business services       | 33 732                      | 71        | 13 552           | 29        | 47 285                   |
| Private community services(c)        | 11 590                      | 72        | 4 548            | 28        | 16 138                   |
| Cultural and recreational services   | 6 952                       | 36        | 12 170           | 64        | 19 122                   |
| Personal and other services          | 6 707                       | 77        | 2 010            | 23        | 8 716                    |
| <b>All industries</b>                | <b>444 425</b>              | <b>53</b> | <b>392 276</b>   | <b>47</b> | <b>836 701</b>           |

(a) Includes private employing and public trading businesses but excludes non-employing businesses and entities in the general government sector. (b) As separate details are not available for large businesses, all businesses are classified as small and medium businesses. (c) Includes private education, health services and community services businesses, but excludes those in the public sector.

Source: *Business Operations and Industry Performance* (8140.0).

## 13.6 OPERATING PROFIT BEFORE TAX(a), By Industry and Size of Business — 1994-95

| Industry                             | Small and medium businesses |           | Large businesses |           | All employing businesses |
|--------------------------------------|-----------------------------|-----------|------------------|-----------|--------------------------|
|                                      | \$m                         | %         | \$m              | %         | \$m                      |
| Agriculture, forestry and fishing(b) | 3 460                       | 100       | ..               | ..        | 3 460                    |
| Mining                               | 1 261                       | 21        | 4 610            | 79        | 5 871                    |
| Manufacturing                        | 4 226                       | 26        | 11 950           | 74        | 16 175                   |
| Electricity, gas and water           | 522                         | 14        | 3 235            | 86        | 3 757                    |
| Construction                         | 2 560                       | 93        | 203              | 7         | 2 763                    |
| Wholesale trade                      | 4 778                       | 68        | 2 202            | 32        | 6 979                    |
| Retail trade                         | 3 402                       | 71        | 1 420            | 29        | 4 822                    |
| Accommodation, cafes and restaurants | 1 668                       | 97        | 59               | 3         | 1 726                    |
| Transport and storage                | 1 017                       | 39        | 1 562            | 61        | 2 579                    |
| Communication services               | 150                         | 5         | 2 649            | 95        | 2 799                    |
| Finance and insurance                | 1 634                       | 8         | 18 369           | 92        | 20 003                   |
| Property and business services       | 4 484                       | 58        | 3 292            | 42        | 7 777                    |
| Private community services(c)        | 2 291                       | 83        | 486              | 17        | 2 776                    |
| Cultural and recreational services   | 774                         | 36        | 1 382            | 64        | 2 156                    |
| Personal and other services          | 628                         | 90        | 69               | 10        | 697                      |
| <b>All industries</b>                | <b>32 853</b>               | <b>39</b> | <b>51 489</b>    | <b>61</b> | <b>84 342</b>            |

(a) Includes private employing and public trading businesses but excludes non-employing businesses and entities in the general government sector. (b) As separate details are not available for large businesses, all businesses are classified as small and medium businesses. (c) Includes private education, health services and community services businesses, but excludes those in the public sector.

Source: *Business Operations and Industry Performance* (8140.0).

Both the Economic Activity Survey and the Australian National Accounts measure overall economic activity, although the Economic Activity Survey is substantially narrower in scope and coverage. Differences also occur in the industry dissection of the two sets of statistics

because they rely on different frameworks of statistical units. A Technical Note discussing this topic is included as Appendix 1 to *Business Operations and Industry Performance, Australia* (8140.0).

## 13.7 INDUSTRY GROSS PRODUCT(a), By Industry and Size of Business — 1994–95

| Industry                             | Small and medium businesses |           | Large businesses |           | All employing businesses |
|--------------------------------------|-----------------------------|-----------|------------------|-----------|--------------------------|
|                                      | \$m                         | %         | \$m              | %         | \$m                      |
| Agriculture, forestry and fishing(b) | 9 411                       | 100       | ..               | ..        | 9 411                    |
| Mining                               | 3 047                       | 18        | 14 014           | 82        | 17 061                   |
| Manufacturing                        | 20 425                      | 34        | 39 212           | 66        | 59 638                   |
| Electricity, gas and water           | 2 336                       | 18        | 10 632           | 82        | 12 968                   |
| Construction                         | 9 890                       | 83        | 2 018            | 17        | 11 908                   |
| Wholesale trade                      | 16 118                      | 70        | 6 982            | 30        | 23 101                   |
| Retail trade                         | 13 909                      | 63        | 8 000            | 37        | 21 909                   |
| Accommodation, cafes and restaurants | 7 177                       | 77        | 2 179            | 23        | 9 356                    |
| Transport and storage                | 5 911                       | 34        | 11 325           | 66        | 17 236                   |
| Communication services               | 393                         | 3         | 12 007           | 97        | 12 400                   |
| Finance and insurance(c)             | 1 345                       | ..        | -1 811           | ..        | -466                     |
| Property and business services       | 17 098                      | 72        | 6 521            | 28        | 23 619                   |
| Private community services(d)        | 8 242                       | 69        | 3 757            | 31        | 12 000                   |
| Cultural and recreational services   | 2 314                       | 44        | 2 935            | 56        | 5 250                    |
| Personal and other services          | 2 729                       | 74        | 949              | 26        | 3 678                    |
| <b>All industries</b>                | <b>120 348</b>              | <b>50</b> | <b>118 719</b>   | <b>50</b> | <b>239 068</b>           |

(a) Includes private employing and public trading businesses but excludes non-employing businesses and entities in the general government sector. (b) As separate details are not available for large businesses, all businesses are classified as small and medium businesses. (c) Industry Gross Product for Finance and insurance is negative because it does not take account of implicit charges for financial services included in interest. (d) Includes private education, health services and community services businesses, but excludes those in the public sector.

Source: *Business Operations and Industry Performance* (8140.0).

Tables 13.8 and 13.9 present statistics, in respect of 1994–95, from the first year of the ABS' longitudinal survey of business growth and performance. The survey also collected some data in respect of 1993–94. Businesses of all sizes are included in the scope of this survey.

Businesses with static employment were defined as those where the change in employment ranged from –10% to +10%. Businesses with increasing employment were those where the

growth in employment was more than 10%. Businesses with decreasing employment were those where employment declined by more than 10%.

Just over two-thirds of private employing businesses in the selected industries had static employment between 30 June 1994 and 30 June 1995.

Almost 18% of businesses increased their employment by more than 10%.

## 13.8 CHANGE IN EMPLOYMENT(a), By Industry — 30 June 1994 to 30 June 1995

| Selected industries                  | Proportion of businesses with employment |             |             |
|--------------------------------------|------------------------------------------|-------------|-------------|
|                                      | Decreasing                               | Static      | Increasing  |
|                                      | %                                        | %           | %           |
| Mining                               | 12.4                                     | 73.6        | 14.0        |
| Manufacturing                        | 15.1                                     | 59.6        | 25.3        |
| Construction                         | 17.8                                     | 68.6        | 13.6        |
| Wholesale trade                      | 9.6                                      | 69.4        | 21.1        |
| Retail trade                         | 12.0                                     | 68.4        | 19.6        |
| Accommodation, cafes and restaurants | 11.6                                     | 70.5        | 17.9        |
| Transport and storage                | 14.1                                     | 72.1        | 13.8        |
| Finance and insurance                | 10.0                                     | 78.6        | 11.4        |
| Property and business services       | 13.3                                     | 70.1        | 16.7        |
| Other selected industries            | 17.7                                     | 67.2        | 15.1        |
| <b>All selected industries</b>       | <b>13.6</b>                              | <b>68.7</b> | <b>17.7</b> |

(a) Includes private employing businesses but excludes public trading businesses.

Source: *Small and Medium Enterprises, Growth and Performance, Australia* (8141.0).

## 13.9 CHANGE IN SALES OF GOODS AND SERVICES(a), By Industry — 1993–94 to 1994–95

|                                      | Proportion of businesses with sales of goods and services |             |             |
|--------------------------------------|-----------------------------------------------------------|-------------|-------------|
|                                      | Decreasing                                                | Static      | Increasing  |
| Selected industries                  | %                                                         | %           | %           |
| Mining                               | 38.4                                                      | 36.2        | 25.4        |
| Manufacturing                        | 16.7                                                      | 35.7        | 47.6        |
| Construction                         | 23.1                                                      | 32.8        | 44.1        |
| Wholesale trade                      | 14.5                                                      | 40.3        | 45.3        |
| Retail trade                         | 15.2                                                      | 52.6        | 32.2        |
| Accommodation, cafes and restaurants | 9.6                                                       | 56.4        | 34.0        |
| Transport and storage                | 14.4                                                      | 33.5        | 52.2        |
| Finance and insurance                | 21.0                                                      | 41.7        | 37.3        |
| Property and business services       | 18.8                                                      | 37.3        | 43.9        |
| Other selected industries            | 15.0                                                      | 51.2        | 33.9        |
| <b>All selected industries</b>       | <b>17.0</b>                                               | <b>42.4</b> | <b>40.6</b> |

(a) Includes private employing businesses but excludes public trading businesses.

Source: *Small and Medium Enterprises, Growth and Performance, Australia (8141.0)*.

Manufacturing (25.3%) and Wholesale trade (21.1%) recorded the largest percentages of businesses which increased employment by more than 10%. Wholesale trade was also the only industry in which fewer than 10% of businesses decreased their employment by more than 10%. In the Construction industry, 17.8% of employing businesses reported decreases in employment of more than 10%. (Note that a substantial number of businesses in Construction do not have employees, and so are excluded from these data.)

Just over 40% of all businesses in the selected industries recorded increased sales of goods and services from 1993–94 to 1994–95. During this time, sales decreased for 17% of businesses.

The Transport and storage industry recorded the largest proportion of businesses with an increase in sales from 1993–94 to 1994–95 (52.2%) while the Accommodation, cafes and restaurants industry was the only industry to have less than 10% of businesses recording a decrease in sales.

In the Mining industry, 38.4% of businesses reported decreases in sales of more than 10%.

## Business operations and industry performance

Table 13.10 presents measures of business operations (in terms of income and expenditure) by industry. The statistics relate only to employing businesses (public and private sectors) but exclude general government. Table 13.11 shows a selection of performance ratios suitable for comparing performance across industries. All the data items listed are defined in

*Business Operations and Industry Performance, Australia (8140.0)* and the derivations of the performance ratios are presented after table 13.11.

These tables also show the relative importance (based on financial measures) of various industries. The Finance and insurance industry accounted for 24% of the operating profits and 41% of the net worth of all industries included. Conversely, Manufacturing accounted for 19% of operating profits and only 9% of net worth. Agriculture, forestry and fishing accounted for 4% of operating profits but 14% of net worth.

The relative performance of industries, like the relative performance of businesses, is best analysed by reference to a combination of performance ratios and level estimates. Various ratios commonly used in financial analysis are included in table 13.11. These show, for example, that in 1994–95:

- industries which converted the highest proportion of their sales into profit (as represented by the profit margin) were Finance and insurance, and Mining;
- businesses in Cultural and recreational services, Construction, and Retail trade reported, on average, the highest return on assets;
- the greatest ability to service debt charges from profits (as represented by the interest coverage ratio) was shown in Private community services, Cultural and recreational services, and Manufacturing; and
- the industry with the highest return on net worth was Construction.

## 13.10 BUSINESS OPERATIONS, By Industry(a) — 1994–95

|                                  | Agriculture,<br>forestry and<br>fishing | Mining                      | Manufacturing         | Electricity,<br>gas and<br>water | Construction                  | Wholesale<br>trade                 | Retail<br>trade             | Accom-<br>modation,<br>cafes and<br>restaurants |
|----------------------------------|-----------------------------------------|-----------------------------|-----------------------|----------------------------------|-------------------------------|------------------------------------|-----------------------------|-------------------------------------------------|
|                                  | \$m                                     | \$m                         | \$m                   | \$m                              | \$m                           | \$m                                | \$m                         | \$m                                             |
| Sales of goods and services      | 26 961                                  | 33 181                      | 195 958               | 28 522                           | 48 206                        | 169 252                            | 137 872                     | 24 136                                          |
| Less                             |                                         |                             |                       |                                  |                               |                                    |                             |                                                 |
| Cost of sales                    | 18 023                                  | 16 359                      | 137 827               | 16 139                           | 36 650                        | 146 391                            | 115 992                     | 14 819                                          |
| Trading profit                   | 8 938                                   | 16 822                      | 58 131                | 12 383                           | 11 556                        | 22 861                             | 21 880                      | 9 317                                           |
| Plus                             |                                         |                             |                       |                                  |                               |                                    |                             |                                                 |
| Interest income                  | 245                                     | 748                         | 698                   | 361                              | 166                           | 798                                | 460                         | 219                                             |
| Other operating income           | 1 190                                   | 934                         | 1 787                 | 1 318                            | 1 236                         | 1 644                              | 850                         | 507                                             |
| Less                             |                                         |                             |                       |                                  |                               |                                    |                             |                                                 |
| Labour costs                     | 3 202                                   | 4 958                       | 33 781                | 3 449                            | 8 589                         | 13 953                             | 15 250                      | 6 211                                           |
| Depreciation                     | 1 760                                   | 4 064                       | 5 592                 | 3 275                            | 725                           | 1 563                              | 1 292                       | 876                                             |
| Other operating expenses         | 366                                     | 2 179                       | 2 386                 | 151                              | 366                           | 707                                | 529                         | 277                                             |
| Earnings before interest and tax | 5 046                                   | 7 304                       | 18 857                | 7 186                            | 3 278                         | 9 080                              | 6 119                       | 2 679                                           |
| Less                             |                                         |                             |                       |                                  |                               |                                    |                             |                                                 |
| Interest expenses                | 1 585                                   | 1 433                       | 2 682                 | 3 429                            | 515                           | 2 101                              | 1 297                       | 953                                             |
| Operating profit before tax      | 3 460                                   | 5 871                       | 16 175                | 3 757                            | 2 763                         | 6 979                              | 4 822                       | 1 726                                           |
|                                  | Transport and storage                   | Communi-<br>cation services | Finance and insurance | Property and business services   | Private community services(b) | Cultural and recreational services | Personal and other services | All industries                                  |
|                                  | \$m                                     | \$m                         | \$m                   | \$m                              | \$m                           | \$m                                | \$m                         | \$m                                             |
| Sales of goods and services      | 40 900                                  | 19 373                      | 21 080                | 47 285                           | 16 138                        | 19 122                             | 8 716                       | 836 701                                         |
| Less                             |                                         |                             |                       |                                  |                               |                                    |                             |                                                 |
| Cost of sales                    | 25 444                                  | 7 275                       | 21 594                | 24 572                           | 8 286                         | 14 095                             | 5 213                       | 608 679                                         |
| Trading profit                   | 15 456                                  | 12 098                      | -514                  | 22 713                           | 7 851                         | 5 027                              | 3 503                       | 228 023                                         |
| Plus                             |                                         |                             |                       |                                  |                               |                                    |                             |                                                 |
| Interest income                  | 284                                     | 148                         | 53 014                | 2 622                            | 292                           | 131                                | 155                         | 60 341                                          |
| Other operating income           | 3 190                                   | 245                         | 12 810                | 6 155                            | 7 574                         | 872                                | 1 284                       | 41 597                                          |
| Less                             |                                         |                             |                       |                                  |                               |                                    |                             |                                                 |
| Labour costs                     | 11 530                                  | 6 355                       | 11 818                | 16 768                           | 11 546                        | 2 646                              | 3 431                       | 153 487                                         |
| Depreciation                     | 2 934                                   | 2 538                       | 1 823                 | 1 892                            | 674                           | 567                                | 475                         | 30 050                                          |
| Other operating expenses         | 443                                     | 195                         | 903                   | 970                              | 279                           | 312                                | 155                         | 10 219                                          |
| Earnings before interest and tax | 4 023                                   | 3 403                       | 50 765                | 11 861                           | 3 217                         | 2 504                              | 882                         | 136 205                                         |
| Less                             |                                         |                             |                       |                                  |                               |                                    |                             |                                                 |
| Interest expenses                | 1 444                                   | 605                         | 30 762                | 4 084                            | 441                           | 348                                | 185                         | 51 863                                          |
| Operating profit before tax      | 2 579                                   | 2 799                       | 20 003                | 7 777                            | 2 776                         | 2 156                              | 697                         | 84 342                                          |

(a) Includes private employing and public trading businesses but excludes non-employing businesses and entities in the general government sector. (b) Includes private education, health services and community services businesses, but excludes those in the public sector.

Source: *Business Operations and Industry Performance* (8140.0).

## 13.11 INDUSTRY PERFORMANCE RATIOS(a), 1994–95

| Industry                             | Profit margin | Return on assets | Return on net worth | Long-term debt to equity | Current ratio | Interest coverage |
|--------------------------------------|---------------|------------------|---------------------|--------------------------|---------------|-------------------|
|                                      | %             | %                | %                   | times                    | times         | times             |
| Agriculture, forestry and fishing    | 12.2          | 2.7              | 3.2                 | 0.1                      | 2.4           | 3.2               |
| Mining                               | 16.8          | 8.3              | 16.3                | 0.5                      | 1.1           | 5.1               |
| Manufacturing                        | 8.2           | 10.0             | 22.4                | 0.5                      | 1.2           | 7.0               |
| Electricity, gas and water           | 12.4          | 3.4              | 5.8                 | 0.5                      | 0.8           | 2.1               |
| Construction                         | 5.6           | 12.2             | 54.4                | 1.3                      | 1.1           | 6.4               |
| Wholesale trade                      | 4.1           | 8.5              | 32.6                | 0.7                      | 1.2           | 4.3               |
| Retail trade                         | 3.5           | 12.0             | 40.6                | 0.8                      | 1.1           | 4.7               |
| Accommodation, cafes and restaurants | 6.9           | 6.4              | 15.2                | 0.8                      | 0.8           | 2.8               |
| Transport and storage                | 5.8           | 4.1              | 9.7                 | 0.9                      | 0.8           | 2.8               |
| Communication services               | 14.2          | 8.9              | 19.7                | 0.5                      | 0.8           | 5.6               |
| Finance and insurance                | 23.0          | 2.2              | 6.4                 | ..                       | ..            | 1.7               |
| Property and business services       | 13.9          | 5.5              | 14.2                | 0.7                      | 1.0           | 2.9               |
| Private community services(b)        | 11.6          | 11.3             | 21.6                | 0.5                      | 0.5           | 7.3               |
| Cultural and recreational services   | 10.7          | 12.4             | 28.3                | 0.8                      | 0.9           | 7.2               |
| Personal and other services          | 6.9           | 6.5              | 11.5                | 0.4                      | 1.5           | 4.8               |
| <b>All industries</b>                | <b>9.0</b>    | <b>4.6</b>       | <b>11.0</b>         | <b>—</b>                 | <b>—</b>      | <b>2.6</b>        |

(a) Includes private employing and public trading businesses but excludes non-employing businesses and entities in the general government sector. (b) Includes private education, health services and community services businesses, but excludes those in the public sector.

Source: *Business Operations and Industry Performance* (8140.0).

The derivations of the performance ratios shown in table 13.11 are as follows:

- Profit margin is operating profit before tax as a percentage of sales of goods and services plus interest income plus other operating income;
- Return on assets is operating profit before tax as a percentage of total assets;
- Return on net worth is operating profit before tax as a percentage of net worth;
- Long-term debt to equity is non-current liabilities as a proportion of net worth;
- Current ratio is current assets as a proportion of current liabilities; and
- Interest coverage is earnings before interest and tax as a proportion of interest expenses.

## Employment in industries

Table 13.12 shows the total number of working proprietors, partners and employees on the payrolls of employing businesses (public and private sectors), classified by industry, at the end of June 1991 to 1995. Businesses which have not registered as group employers with the Australian Taxation Office are out of scope of the estimates in table 13.12, so that self-employed

persons working in non-employing businesses are excluded (although they may be included in some other ABS measures of employment).

Of the goods-producing industries, Mining, Manufacturing and Electricity, gas and water experienced declining employment, while Agriculture, fishing and forestry and Construction increased employment over the period June 1991 to June 1995. In most of the service-providing industries employment increased over the period, particularly in Property and business services, Cultural and recreational services and Personal and other services, where it rose by over 20% in the four years from June 1991. Employment in Finance and insurance, Transport and storage and Communication services declined during the same period.

Despite the decline in employment in Manufacturing, this industry remains the largest employer, closely followed by Retail trade.

In evaluating changing employment, it is important to recognise that industry restructuring, outsourcing of some functions and contract employment have impacted more substantially on some industries than others. Broader discussion of employment changes over time is included in *Chapter 6, Labour*.

**13.12 EMPLOYMENT IN INDUSTRIES(a)**

|                                      | June 1991    | June 1992    | June 1993    | June 1994    | June 1995    |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Industry                             | '000         | '000         | '000         | '000         | '000         |
| Agriculture, forestry and fishing    | 334          | 330          | 348          | 349          | 348          |
| Mining                               | 93           | 89           | 81           | 77           | 81           |
| Manufacturing                        | 1 079        | 1 009        | 991          | 950          | 960          |
| Electricity, gas and water           | 110          | 99           | 91           | 81           | 73           |
| Construction                         | 280          | 256          | 261          | 275          | 289          |
| Wholesale trade                      | 393          | 401          | 396          | 422          | 413          |
| Retail trade                         | 846          | 860          | 848          | 873          | 908          |
| Accommodation, cafes and restaurants | 319          | 351          | 344          | 379          | 380          |
| Transport and storage                | 325          | 294          | 294          | 292          | 311          |
| Communication services               | 127          | 124          | 114          | 116          | 124          |
| Finance and insurance                | 330          | 314          | 297          | 296          | 284          |
| Property and business services       | 506          | 567          | 556          | 552          | 618          |
| Private community services(b)        | 488          | 495          | 512          | 517          | 534          |
| Cultural and recreational services   | 103          | 112          | 120          | 123          | 158          |
| Personal and other services          | 124          | 139          | 137          | 143          | 152          |
| <b>All industries</b>                | <b>5 458</b> | <b>5 441</b> | <b>5 389</b> | <b>5 444</b> | <b>5 632</b> |

(a) Includes private employing and public trading businesses but excludes non-employing businesses and entities in the general government sector. (b) Includes private education, health services and community services businesses, but excludes those in the public sector.

Source: *Business Operations and Industry Performance* (8140.0).

**Labour productivity**

Changes in the number of hours worked tend to reflect the level of economic activity of an industry. A developing or buoyant industry will generally show an increase in the number of hours worked over time. However, structural reform or increased use of technology within an

industry may result in changes in employment relative to output.

A general indication of such effects is provided in table 13.13, showing constant price estimates of gross product per hour worked.

**13.13 INDEXES OF GROSS PRODUCT PER HOUR WORKED, By Industry(a)(b)**

| Industry                             | 1984-85     | 1993-94      | 1994-95      | 1995-96      |
|--------------------------------------|-------------|--------------|--------------|--------------|
| Agriculture, forestry and fishing    | 97.8        | 116.5        | 94.5         | 111.8        |
| Mining                               | 93.1        | 119.9        | 128.8        | 135.1        |
| Manufacturing                        | 88.6        | 117.1        | 115.9        | 118.3        |
| Electricity, gas and water           | 66.7        | 127.8        | 135.9        | 147.3        |
| Construction                         | 107.4       | 103.0        | 101.9        | 102.8        |
| Wholesale trade                      | 102.6       | 93.5         | 108.4        | 113.8        |
| Retail trade                         | 108.4       | 107.4        | 103.5        | 106.4        |
| Accommodation, cafes and restaurants | 103.2       | 93.7         | 95.2         | 95.4         |
| Transport and storage                | 92.1        | 117.7        | 122.4        | 123.8        |
| Communication                        | 67.9        | 148.4        | 147.2        | 156.0        |
| Cultural and recreational services   | 119.5       | 102.7        | 96.9         | 100.3        |
| <b>All industries</b>                | <b>97.0</b> | <b>106.2</b> | <b>106.2</b> | <b>108.1</b> |

(a) Average 1989-90 prices. (b) Estimates of gross product per hour worked are not presented for six industries: Finance and insurance; Property and business services; Government administration and defence; Education; Health and community services; and Personal and other services, because the estimates of gross product at average 1989-90 prices are derived using input data as indicators of output.

Source: *Australian National Accounts: National Income, Expenditure and Product* (5204.0).

## Industry contribution to capital expenditure

Table 13.14 shows estimates of the level of private expenditure on capital assets (non-dwelling structures and equipment) by industry, and provides a general indication of trends in productive capacity.

Industries with the most significant increases in levels of capital expenditure since 1983–84 were Property and business services (up \$4,292m), Mining (up \$3,204m), Transport, storage and communication services (up \$3,036m), and Manufacturing (up \$2,666m).

Other significant increases were Electricity, gas and water (up 1372%), Cultural and recreational

services (up 392%), and Personal and other services (up 189%). For some of these industries, like electricity, gas and water, these increases are in part a reflection of structural change and a move from the public to the private sector in some activities.

While capital expenditure in the Agriculture, forestry and fishing industry has been steadily increasing over the 1990s, the level of private expenditure on capital assets in 1995–96 was still 23% lower than that in 1983–84. This is due to significant declines in the level of private expenditure on capital assets in the industry between 1984–85 and 1986–87 and between 1988–89 and 1990–91, reflecting the impact of drought and financial conditions in the industry.

**13.14 PRIVATE GROSS FIXED CAPITAL EXPENDITURE(a), Average 1989–90 Prices**

|                                                 | 1983–84       | 1993–94       | 1994–95       | 1995–96       |
|-------------------------------------------------|---------------|---------------|---------------|---------------|
| Industry                                        | \$m           | \$m           | \$m           | \$m           |
| Agriculture, forestry and fishing               | 4 052         | 2 763         | 2 852         | 3 130         |
| Mining                                          | 3 647         | 5 817         | 6 523         | 6 851         |
| Manufacturing                                   | 5 851         | 7 276         | 8 655         | 8 517         |
| Electricity, gas and water                      | 88            | 896           | 1 073         | 1 295         |
| Construction                                    | 1 532         | 1 874         | 2 018         | 2 675         |
| Wholesale trade                                 | 2 116         | 2 405         | 1 988         | 1 611         |
| Retail trade                                    | 2 094         | 3 404         | 3 731         | 4 429         |
| Accommodation, cafes and restaurants            | 1 103         | 1 225         | 2 143         | 2 551         |
| Transport and storage; Communication services   | 2 253         | 3 351         | 4 077         | 5 289         |
| Finance and insurance                           | 1 621         | 2 236         | 2 391         | 2 088         |
| Property and business services                  | 2 265         | 4 358         | 5 300         | 6 557         |
| Education                                       | 254           | 403           | 376           | 447           |
| Health and community services                   | 604           | 1 374         | 1 427         | 1 285         |
| Cultural and recreational services              | 388           | 667           | 1 360         | 1 910         |
| Personal and other services                     | 149           | 257           | 328           | 431           |
| Ownership of dwellings                          | 14 956        | 21 897        | 22 740        | 19 808        |
| Total (excluding real estate transfer expenses) | 42 973        | 60 203        | 66 982        | 68 874        |
| Real estate transfer expenses                   | 5 035         | 6 566         | 6 350         | 5 760         |
| <b>Total</b>                                    | <b>48 008</b> | <b>66 769</b> | <b>73 332</b> | <b>74 634</b> |

(a) Includes private employing businesses but excludes public trading businesses.

Source: Australian National Accounts: Capital Stock (5221.0).

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## Introduction

This chapter presents information about Australia's environment and its interaction with society and the economy. The topic encompasses a broad range of issues for which a vast amount of information is available. It is not possible to address all of these aspects here, but previous Year Books cover some topics including greenhouse gases, sustainable development, environmental indicators, water quality and environmental law. The focus of this chapter is on recent national and international activities and issues for which new information has become available. This includes information on the Natural Heritage Trust, expenditure on the environment, biodiversity, the results of a household survey on environmental issues and some aspects of the relationship between transport and the environment.

## National activities

### Natural Heritage Trust

#### Background

The Natural Heritage Trust of Australia Reserve was established in 1997. Its main objective is to conserve, repair and replenish Australia's natural capital infrastructure (*Natural Heritage Trust of Australia Act 1997*). An expenditure package, totalling \$1.249 billion from 1996–97 to 2001–02, will be funded through the Trust, with a capital base of \$300 million retained in perpetuity to

fund future environmental activities. The focus of the Trust is on five key environmental themes: vegetation, rivers, biodiversity, land, and coasts and oceans. The scope of each of these is outlined below. Some funding will also be available for programs involving environment protection, the atmosphere and Australian heritage. The Trust, which is administered jointly by the Department of Primary Industries and Energy and the Department of Environment, Sport and Territories, encourages the development of an integrated and co-ordinated response to the five key environmental themes at the community, regional, State and national levels. The total funding for Trust-related programs is summarised in table 14.1. This includes funding for related programs from non-Trust sources.

#### Vegetation

The Natural Heritage Trust will substantially boost funding for the protection and enhancement of native vegetation across Australia. The focus will be on two specific initiatives, Bushcare and Farm Forestry.

The core objective of Bushcare is to reverse the long-term decline in the quality and extent of Australia's native vegetation in order to conserve biodiversity and contribute to the ecologically sustainable management of natural resources (Department of Environment Sport and Territories, 1997). Bushcare is the largest single initiative of the Trust and will devote \$330 million to extensive revegetation activities and to the protection of remnant native vegetation at risk from unsustainable clearing.

**14.1 ESTIMATED TOTAL EXPENDITURE ON NATURAL HERITAGE TRUST-RELATED PROGRAMS**

|                        | 1996–97 | 1997–98 | 1998–99 | 1999–00 | 2000–01 | 2001–02 | Total   |
|------------------------|---------|---------|---------|---------|---------|---------|---------|
|                        | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     |
| Vegetation             | 21.7    | 46.6    | 87.1    | 90.4    | 85.4    | 74.0    | 405.2   |
| Rivers(a)              | 10.8    | 48.3    | 68.3    | 66.8    | 70.4    | 19.3    | 283.9   |
| Biodiversity           | 7.9     | 17.7    | 27.8    | 29.8    | 21.3    | 3.0     | 107.4   |
| Land resources(a)      | 108.8   | 125.8   | 150.7   | 125.5   | 121.9   | 104.9   | 737.6   |
| Coasts and oceans      | 9.2     | 27.4    | 32.0    | 31.5    | 24.2    | 1.0     | 125.3   |
| Environment protection | 0.5     | 2.0     | 2.0     | 0.5     | —       | —       | 5.0     |
| Atmosphere             | 1.5     | 3.5     | 3.5     | 4.0     | 3.5     | —       | 16.0    |
| Australian Heritage    | 16.7    | 22.7    | 9.3     | 8.9     | 8.1     | —       | 65.7    |
| Total                  | 176.9   | 294.0   | 380.8   | 357.4   | 334.8   | 202.2   | 1 746.2 |

(a) Land resources includes some funding relating to Murray-Darling 2001 as part of the Natural Resource Management Program.

Source: Commonwealth of Australia, *Investing in Our Natural Heritage*, 1997.

The aim of the Farm Forestry Program is to encourage the adoption into farming systems of commercial tree growing for wood and non-wood production, thereby increasing agricultural productivity and aiding sustainable land management.

### **Biodiversity conservation**

The Natural Heritage Trust will focus on six specific areas in biodiversity conservation:

- National Reserve System;
- Endangered Species Program;
- Bushcare: The National Vegetation Initiative (see *Vegetation* section);
- World Heritage Management Program;
- National Feral Animals Control Strategy (see *Land* section); and
- National Weeds Strategy (see *Land* section).

The National Reserve System aims to assist with the establishment and maintenance of a comprehensive, adequate and representative network of protected areas across Australia. Other measures outside protected areas, such as farms, roadsides, streams and urban and coastal areas, will complement this network.

The Natural Heritage Trust is committed to preventing the further extinction of Australia's unique animals and plants and to restoring endangered species to the wild. The *Endangered Species Protection Act 1992* lists over 145 animals and 886 plants which are endangered or vulnerable.

The objectives of the Endangered Species Program are to implement recovery plans for endangered species; implement threat abatement plans to reduce the causes of species becoming endangered; and encourage local and regional groups to be involved in the conservation of endangered species.

The World Heritage Management Program will improve the management of all of Australia's World Heritage properties in cooperation with State, Territory and local governments. The 11 World Heritage properties in Australia are the Great Barrier Reef, Kakadu National Park, Fraser Island, Shark Bay, Tasmanian Wilderness, Wet Tropics of Queensland, Uluru–Kata Tjuta National Park, Willandra Lakes Region, Australian Fossil Mammal Sites at Riversleigh and Naracoorte, Central Eastern Rainforest Reserves (Australia) and Lord Howe Island Group.

### **Rivers**

The Natural Heritage Trust will fund projects aimed at improving water quality and the ecological health of river systems. The three main projects will be the National Rivercare Program, Murray–Darling 2001 and the National Wetlands Program.

The National Rivercare Program will assist the sustainable management, rehabilitation and conservation of rivers outside the Murray–Darling Basin. Rivercare will build on programs which have already made an important contribution towards addressing river issues, including the National River Health Program, Waterwatch Australia and elements of the Fisheries Action Program. Community involvement will be encouraged.

The Murray–Darling Basin is one of Australia's most important agricultural regions. Immediate action is required to rehabilitate the Basin to ensure a sustainable future for its ecosystems. The objectives of the Murray–Darling 2001 project are to:

- improve the health of key river systems;
- encourage ecologically and economically sustainable land use;
- restore riverbank land systems, wetlands and flood plains; and
- improve water quality.

The National Wetlands Program will support local projects to rehabilitate degraded wetlands and contribute to the overall health of Australia's waterways. The program will provide resources for activities aimed at improving the management of nationally significant wetlands, and for monitoring the health of wetlands.

### **Land**

The Natural Heritage Trust will provide funding support for five specific land management initiatives:

- National Landcare Program;
- National Land and Water Resources Audit;
- National Feral Animal Control Strategy;
- National Weeds Strategy; and
- Advanced Property Management Planning.

Landcare supports activities which contribute to the sustainable management of land, water, vegetation and biological diversity. With

increased funding from the Natural Heritage Trust, the scope of the program will be broadened and a more integrated approach to its activities adopted.

Increased support will be provided for the development of community initiated and managed projects. There are more than 3,200 local Landcare groups throughout Australia. About one third of farmers are members of a Landcare group.

A National Land and Water Resources Audit will be established to provide a baseline for carrying out assessments of the effectiveness of policies and programs to overcome land and water degradation and improve natural resources management.

A National Feral Animal Control Strategy will address the management of feral animals to reduce damage to the natural environment and agricultural production.

The National Weeds Strategy aims to control weeds of national significance which most threaten the natural environment and agriculture, and to encourage the recovery of threatened species.

Farmers will be provided with assistance to attend advanced property management training

courses and to engage professional consultants in the field of advanced, integrated farm management planning.

### **Coasts and oceans**

Coasts and Clean Seas projects will tackle pollution problems and threats to water quality and marine life. Sources of pollution such as ocean outfalls, stormwater pollution and oil spills will be targeted. Some funding will be provided for community projects concerned with rehabilitating coastal environments, and for restoring fish habitats through the Fisheries Action Program.

Local and regional plans will be developed to improve the coordination and management of coastal regions. Other activities will include coastal monitoring and the protection of coasts and oceans from exotic marine pests brought to Australia by ships.

### **Natural Heritage Trust funding**

The Natural Heritage Trust will directly fund a wide range of specific programs. The funding for some of these programs from 1996–97 to 2001–02 is summarised in table 14.2. This funding is a sub-set of the total funding for all Trust-related programs summarised in table 14.1. Table 14.2 only includes funding specifically provided through the Trust.

## 14.2 NATURAL HERITAGE TRUST FUNDING

|                                                             | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02 | Total |
|-------------------------------------------------------------|---------|---------|---------|---------|---------|---------|-------|
|                                                             | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     | \$m   |
| Vegetation                                                  |         |         |         |         |         |         |       |
| National Vegetation Initiative                              | 4.0     | 29.1    | 70.5    | 78.0    | 78.0    | 69.0    | 328.6 |
| Farm Forestry                                               | —       | 1.6     | 4.8     | 6.4     | 5.8     | 3.4     | 22.0  |
| Rivers                                                      |         |         |         |         |         |         |       |
| Murray-Darling 2001                                         | 4.7     | 29.5    | 37.5    | 38.5    | 43.5    | 9.3     | 163.0 |
| National Rivercare Initiative                               | 0.4     | 12.4    | 24.4    | 25.4    | 25.4    | 9.0     | 97.0  |
| National Wetlands Program                                   | 1.3     | 1.8     | 2.5     | 2.9     | 1.5     | 1.0     | 11.0  |
| Tasmanian Regional Remediation Program                      | 1.8     | 3.5     | 3.5     | —       | —       | —       | 8.8   |
| Biodiversity                                                |         |         |         |         |         |         |       |
| National System of Reserves                                 | 2.0     | 11.0    | 21.0    | 23.0    | 20.0    | 3.0     | 80.0  |
| Endangered Species Program                                  | 2.0     | 4.3     | 4.2     | 5.5     | —       | —       | 16.0  |
| Land Resources                                              |         |         |         |         |         |         |       |
| National Landcare Program (including landcare tax measures) | 10.2    | 35.0    | 63.0    | 57.0    | 54.0    | 44.8    | 264.0 |
| National Land and Water Audit                               | 1.6     | 7.5     | 7.0     | 7.0     | 7.0     | 7.0     | 37.0  |
| National Weeds Strategy                                     | 2.5     | 5.0     | 5.0     | 5.0     | 5.0     | 1.7     | 24.0  |
| National Feral Animal Control Strategy                      | 4.4     | 3.7     | 2.7     | 2.6     | 2.1     | 0.5     | 16.0  |
| Property Management Planning                                | 0.4     | 3.0     | 3.0     | 3.0     | 3.0     | 2.6     | 15.0  |
| Coasts and Oceans                                           |         |         |         |         |         |         |       |
| Coasts and Clean Seas                                       | —       | 22.5    | 27.5    | 31.0    | 24.0    | 1.0     | 106.0 |
| Human Settlements                                           |         |         |         |         |         |         |       |
| Waste Management Awareness Program                          | 0.5     | 2.0     | 2.0     | 0.5     | —       | —       | 5.0   |
| Atmosphere                                                  |         |         |         |         |         |         |       |
| Air Pollution in Major Cities                               | 1.5     | 3.5     | 3.5     | 4.0     | 3.5     | —       | 16.0  |
| Australian Heritage                                         |         |         |         |         |         |         |       |
| World Heritage Area Management and Upkeep                   | 4.7     | 11.7    | 8.3     | 7.9     | 7.1     | —       | 39.7  |

Source: Commonwealth of Australia, *Investing in Our Natural Heritage*, 1997.

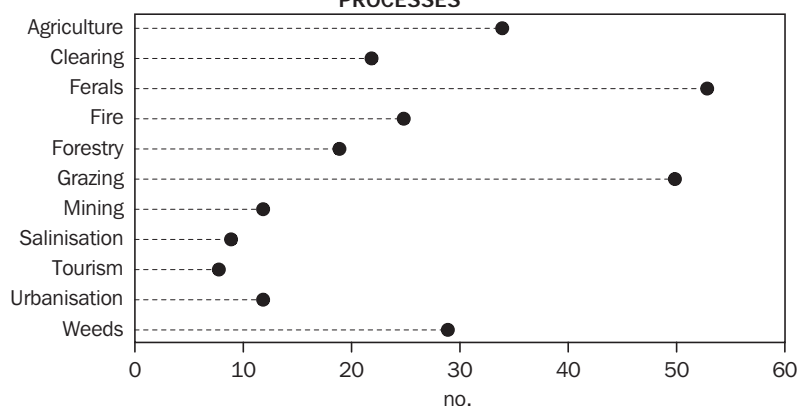
## Biodiversity in Australia — status and recovery actions

Australia is thought to be inhabited by more than 1 million species and has a rich diversity of unique life forms. Biodiversity is the variety of all life forms — the different plants, animals and micro-organisms, the genes they contain and the ecosystems of which they form a part. Australia is the custodian of about 10% of the world's biological diversity and has a high proportion of species found nowhere else, including 85% of flowering plants, 89% of reptiles, 93% of frogs and 84% of mammals. As a party to the 1992 International Convention on Biological Diversity, Australia is committed to the conservation of biodiversity.

Biodiversity in Australia is under pressure. Graph 14.3 shows the number of terrestrial

biogeographic regions in which various threatening processes are considered important by State and Territory conservation agencies. Each of these processes has potential to adversely affect biodiversity through destruction, disturbance or fragmentation of habitats. Feral animals pose a threat to 53 (66% of) biogeographic regions. Rabbits are perhaps the best known and most widespread example. They compete with native fauna for food and contribute to land degradation by burrowing through the soil. Other threatening processes such as grazing and the spread of weeds affect 63% and 36% of regions respectively. The Interim Biogeographic Regionalisation for Australia (IBRA) used in graph 14.3 is the only continent-wide regionalisation agreed to by all States and Territories. It divides the continent into 80 biogeographic regions representing major environmental units.

### 14.3 NUMBER OF BIOGEOGRAPHIC REGIONS AFFECTED BY THREATENING PROCESSES



Source: Adapted from Thackway and Cresswell, 1995 in *State of the Environment Report, 1996*

All groups of higher plants and vertebrates in Australia have species that are highly threatened. Table 14.4 indicates the current conservation

status of Australian flowering plants and vertebrate animals. Australia's record of mammal species extinctions is the worst for any country.

### 14.4 STATUS OF FLOWERING PLANT AND VERTEBRATE ANIMAL SPECIES

|                       | Estimated<br>no. | Endemic<br>% | Presumed<br>extinct(a)<br>no. | Endangered<br>no. | Vulnerable<br>no. | Naturalised<br>(introduced)<br>no. |
|-----------------------|------------------|--------------|-------------------------------|-------------------|-------------------|------------------------------------|
| Flowering plants      | 20 000           | 85           | 76                            | 301               | 708               | 1 500–2 000                        |
| Fish                  |                  |              |                               |                   |                   |                                    |
| Freshwater            | 195              | 90           | 0                             | 9                 | 8                 | 21                                 |
| Marine                |                  |              |                               |                   |                   |                                    |
| Tropical inshore      | —                | 13           | —                             | —                 | —                 | —                                  |
| Temperate inshore     | —                | 85           | —                             | —                 | —                 | —                                  |
| All marine            | 4 000            | 100          | 0                             | 0                 | —                 | 8                                  |
| Amphibians            | 203              | 93           | 3                             | 10                | 19                | 1                                  |
| Reptiles              | 770              | 89           | 0                             | 11                | 40                | 2                                  |
| Birds                 | 777              | 45           | (b)20                         | 25                | 25                | 32                                 |
| Mammals (terrestrial) | 268              | 84           | 19                            | 25                | 18                | 25                                 |

(a) Since 1788. (b) Nineteen once existed on Australian territorial islands, including Lord Howe and Norfolk Islands; only one is extinct on the mainland.

Source: Department of Environment, Sport and Territories, *State of the Environment Report, 1996*.

In response to the decline and extinction of species, legislative and administrative actions have been put in place. The Endangered Species Program, established in 1989, seeks to prevent further extinction of Australian biota and to restore endangered species and ecological communities to secure status in the wild. Action

plans have been prepared for birds, marsupials, freshwater fish, reptiles, rodents, vascular plants, marine mammals, seals and dugongs. Table 14.5 indicates the number of plans that had been prepared and implemented for individual species by 1996.

## 14.5 STATUS OF RECOVERY ACTION ON INDIVIDUAL SPECIES(a)

| Species         | Endangered or vulnerable species | Recovery plan prepared or in preparation |           | Recovery plan being implemented |           |
|-----------------|----------------------------------|------------------------------------------|-----------|---------------------------------|-----------|
|                 |                                  | no.                                      | %         | no.                             | %         |
| Mammals         | 48                               | 13                                       | 27        | 11                              | 23        |
| Birds           | 50                               | 12                                       | 24        | 8                               | 16        |
| Amphibians      | 9                                | 7                                        | 78        | 2                               | 29        |
| Reptiles        | 21                               | 2                                        | 10        | 1                               | 5         |
| Freshwater fish | 13                               | 6                                        | 46        | 2                               | 15        |
| Vascular plants | 890                              | 224                                      | 25        | 124                             | 14        |
| <b>Total</b>    | <b>1 031</b>                     | <b>264</b>                               | <b>26</b> | <b>148</b>                      | <b>14</b> |

(a) As listed in the schedules to the Commonwealth Endangered Species Act.

Source: Department of Environment, Sport and Territories, *State of the Environment Report*, 1996.

## International activities

In 1992, representatives of 178 governments attended the United Nations Conference on Environment and Development. One of the outcomes of the conference was Agenda 21, an internationally agreed plan of action to achieve sustainable development. Agenda 21 details the main methods by which sustainable development is to be implemented and lists specific actions to be undertaken. The United Nations Commission on Sustainable Development (CSD) was established to monitor the implementation of Agenda 21 and met for the fifth time in April 1997. During this session (referred to as CSD5), the Commission functioned as a preparatory and negotiating body for the Special Session of the United Nations General Assembly which was held in June and was primarily concerned with a review of the implementation of Agenda 21.

In contrast to the landmark 1992 conference known as the 'Rio Earth Summit', few new agreements were reached in 1997 and progress in implementing Agenda 21 was judged to have been limited. Member States did, however, commit themselves to ensuring that the next comprehensive review of the implementation of Agenda 21 in the year 2002 should demonstrate greater measurable progress in achieving sustainable development. Some of the outcomes of the review of Agenda 21 at CSD5 and the Special Session of the United Nations Assembly are outlined below.

## Greenhouse gases

Governments agreed to consider legally binding, meaningful, realistic and equitable targets for developed countries that will result in "significant reductions in greenhouse gas

emissions within specified time-frames".

Australia did not support a more specific, binding agreement proposed by member countries of the European Union. This issue was discussed at the third session of the Conference of the Parties to the United Nations Framework Convention on Climate Change held in Kyoto, Japan in December 1997.

## Forests

An International Forum on Forests will be formed by the UN Commission on Sustainable Development to monitor and promote implementation of 130 action proposals agreed to in March 1997. The proposals generally reflect current forest policy in Australia. The establishment of an international forests convention was not supported by a majority of governments, including Australia.

## Energy

It was agreed to consider ways to ensure that environmental costs are included in energy prices, and to encourage the reduction and gradual elimination of subsidies that inhibit sustainable development.

## Oceans and seas

Governments agreed on the urgent need to eliminate overfishing and to consider the impact of subsidies to fishing fleets. A proposal to strengthen the implementation of existing agreements on marine pollution and sustainable use of oceans was also adopted.

## Small island developing states

The implementation of a 'Programme of Action for the Sustainable Development of Small Island Developing States' was adopted. Issues



encompassed by the program are sustainable development of coastal areas, tourism, energy resources, air transport, maritime transport, telecommunications and management of natural and environmental disasters.

## Environmental views and practices

People's views and practices reflect the importance and priority given to environmental issues by society. The ABS has conducted a household survey on environmental issues biennially since 1992. From 1998 the survey will be conducted annually. Some of the results of these surveys are presented here.

## Ranking environmental protection and economic growth

Table 14.6 shows people's rankings of environmental protection and economic growth in ABS surveys over recent years. In 1996, 18.7% of persons indicated a priority for environmental protection. Similar proportions were recorded in 1994 (17.9%) and 1992 (18.8%). The percentage of people ranking environmental protection and economic growth equally has also remained steady (70.6% in 1996, 71.0% in 1994 and 70.3% in 1992). However those according a higher priority to economic growth has risen from 6.6% in 1992 to 7.9% in 1996.

**14.6 RANKING OF ENVIRONMENTAL PROTECTION AND ECONOMIC GROWTH**

|                                                                    | NSW   | Vic.  | Qld   | SA    | WA    | Tas.  | NT    | ACT   | Aust. |
|--------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                                                    | %     | %     | %     | %     | %     | %     | %     | %     | %     |
| <b>APRIL 1996</b>                                                  |       |       |       |       |       |       |       |       |       |
| Environmental protection is more important than economic growth    | 19.0  | 19.1  | 15.8  | 18.0  | 23.5  | 15.8  | 20.8  | 20.6  | 18.7  |
| Environmental protection and economic growth are equally important | 69.2  | 69.8  | 73.2  | 73.0  | 69.5  | 74.8  | 68.5  | 69.9  | 70.6  |
| Environmental protection is less important than economic growth    | 8.2   | 8.4   | 8.9   | 5.9   | 5.5   | 7.6   | **8.3 | 9.2   | 7.9   |
| Can't decide/don't know                                            | 3.7   | 2.7   | 2.1   | 3.1   | 1.5   | **1.9 | **2.5 | **0.2 | 2.8   |
| Total                                                              | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| <b>JUNE 1994</b>                                                   |       |       |       |       |       |       |       |       |       |
| Environmental protection is more important than economic growth    | 17.8  | 16.5  | 19.0  | 18.7  | 19.9  | 12.9  | 20.1  | 22.2  | 17.9  |
| Environmental protection and economic growth are equally important | 69.3  | 71.4  | 71.3  | 73.7  | 72.4  | 75.8  | 73.1  | 69.1  | 71.0  |
| Environmental protection is less important than economic growth    | 7.8   | 7.6   | 6.5   | 5.4   | 4.5   | 7.7   | 5.5   | 6.8   | 7.0   |
| Can't decide/don't know                                            | 5.1   | 4.5   | 3.2   | 2.2   | 3.2   | 3.6   | 1.3   | 1.9   | 4.1   |
| Total                                                              | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| <b>MAY 1992</b>                                                    |       |       |       |       |       |       |       |       |       |
| Environmental protection is more important than economic growth    | 19.5  | 17.5  | 18.2  | 20.9  | 19.3  | 13.4  | 19.4  | 24.4  | 18.8  |
| Environmental protection and economic growth are equally important | 68.8  | 69.7  | 71.0  | 70.5  | 73.4  | 76.8  | 71.9  | 70.0  | 70.3  |
| Environmental protection is less important than economic growth    | 6.7   | 7.6   | 6.8   | 4.6   | 4.9   | 6.5   | **5.9 | **3.6 | 6.6   |
| Can't decide/don't know                                            | 5.0   | 5.2   | 3.9   | 4.0   | 2.4   | 3.2   | **2.8 | **2   | 4.4   |
| Total                                                              | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: *Environmental Issues: People's Views and Practices (4602.0)*.

Environmental concerns

The reported levels of concern of Australians about particular environmental problems is summarised in table 14.7. Air pollution was the issue of concern to the greatest proportion of people in all surveys. Ocean and freshwater

pollution and the destruction of trees and ecosystems were the next most commonly reported concerns, rating at around 24%. About 32% of people had no specific environmental concerns in 1996, compared with 31% in 1994 and 25% in 1992.

14.7 ENVIRONMENTAL CONCERNS

|                                                       | 1992 | 1994 | 1996 |
|-------------------------------------------------------|------|------|------|
|                                                       | %    | %    | %    |
| Air pollution                                         | 40.2 | 34.1 | 30.9 |
| Ocean pollution                                       | 32.3 | 26.7 | 23.8 |
| Freshwater pollution                                  | 29.9 | 25.5 | 23.7 |
| Destruction of trees/ecosystems/deforestation         | 32.8 | 25.6 | 23.6 |
| Garbage/rubbish disposal                              | 22.9 | 15.7 | 14.0 |
| Ozone layer                                           | 28.6 | 17.1 | 10.9 |
| Destruction of animals/wildlife/extinction of species | 19.3 | 13.3 | 9.1  |
| Other pollution                                       | 14.1 | 9.1  | 8.8  |
| Toxic/chemical waste                                  | 21.3 | 11.9 | 8.6  |
| Soil erosion/salinity/land degradation                | 15.3 | 9.6  | 7.7  |
| Nuclear testing/weapons                               | 14.6 | 6.7  | 7.6  |
| Conservation of resources                             | 15.0 | 8.5  | 6.5  |
| Greenhouse effect                                     | 17.2 | 8.8  | 6.3  |
| Urban development/overpopulation                      | 12.6 | 7.8  | 5.9  |
| Other                                                 | 5.8  | 5.7  | 5.5  |
| Uranium mining/use/radioactive materials              | 8.5  | 3.6  | 5.1  |
| Use of pesticides                                     | 13.7 | 7.0  | 4.2  |
| Sand mining                                           | 4.6  | 2.0  | 1.3  |
| No concerns                                           | 25.2 | 31.1 | 31.6 |

Source: *Environmental Issues: People's Views and Practices (4602.0)*.

Disposal of hazardous waste

Information on the disposal of hazardous waste was collected in the 1996 survey and is summarised in table 14.8. The principal method of disposing of hazardous waste from households is the usual garbage collection from the dwelling (62%). The next most commonly reported method of disposal was taking waste materials to a business or shop (25%).

The household garbage collection was the main system used to dispose of garden chemicals or containers (66%), paint products or containers (52%), metal cleaners or containers (74%), oven cleaners or containers (87%), fluorescent globes (77%), general types of batteries (86%), and pharmaceuticals (43%). Car batteries were disposed of primarily by taking them to a business or shop (41%), while motor oil was either taken to a special area at the dump or to a business or shop (both 23%).

**14.8 HOUSEHOLDS DISPOSING HAZARDOUS WASTE, Items Disposed, By Method — March 1996(a)**

|                                        | Garden<br>chemicals | Paint<br>products | Metal<br>cleaners | Oven<br>cleaners | Fluores-<br>cent<br>globes | Car<br>batteries | Other<br>batteries | Motor<br>oil | Pharma-<br>ceuticals | Total          |
|----------------------------------------|---------------------|-------------------|-------------------|------------------|----------------------------|------------------|--------------------|--------------|----------------------|----------------|
| NUMBER ('000)                          |                     |                   |                   |                  |                            |                  |                    |              |                      |                |
| With usual<br>garbage<br>collection    | 305.7               | 397.3             | 172.6             | 626.9            | 530.1                      | 46.0             | 924.9              | 70.4         | 563.2                | 1 956.6        |
| Special service<br>from house          | 21.5                | 61.6              | 8.1               | 19.0             | 27.5                       | 67.4             | 9.3                | 30.3         | **6.9                | 195.9          |
| Dump                                   |                     |                   |                   |                  |                            |                  |                    |              |                      |                |
| General area                           | 58.3                | 187.3             | 26.7              | 50.6             | 83.3                       | 62.0             | 55.2               | 43.6         | 27.7                 | 347.9          |
| Special area                           | 50.4                | 96.6              | 13.9              | 12.7             | 23.1                       | 163.0            | 28.6               | 150.6        | **4.6                | 379.3          |
| Collection point<br>other than<br>dump | 16.2                | 23.2              | **6.7             | **6.4            | **6.3                      | 106.8            | 24.5               | 68.3         | 17.2                 | 207.8          |
| Poured down<br>the drain               | **3.5               | **7.7             | **0.5             | **0.8            | **                         | **0.8            | **                 | **2.3        | 337.1                | 348.4          |
| Taken to a<br>business/shop            | 9.2                 | **7.0             | **3.9             | **3.1            | 13.6                       | 338.5            | 27.4               | 149.9        | 386.2                | 787.3          |
| Buried                                 | **6.3               | 8.5               | **0.9             | **2.8            | **4.9                      | 12.3             | 9.3                | 26.2         | 16.6                 | 71.5           |
| Other                                  | 12.2                | 14.7              | **2.0             | **5.3            | **5.6                      | 34.4             | **6.6              | 122.5        | 26.1                 | 207.9          |
| <b>Total</b>                           | <b>466.6</b>        | <b>769.5</b>      | <b>231.9</b>      | <b>722.4</b>     | <b>690.5</b>               | <b>823.6</b>     | <b>1 079.1</b>     | <b>653.8</b> | <b>1 321.2</b>       | <b>3 158.7</b> |
| PROPORTION (%)                         |                     |                   |                   |                  |                            |                  |                    |              |                      |                |
| With usual<br>garbage<br>collection    | 65.5                | 51.6              | 74.4              | 86.8             | 76.8                       | 5.6              | 85.7               | 10.8         | 42.6                 | 61.9           |
| Special service<br>from house          | 4.6                 | 8.0               | 3.5               | 2.6              | 4.0                        | 8.2              | 0.9                | 4.6          | **0.5                | 6.2            |
| Dump                                   |                     |                   |                   |                  |                            |                  |                    |              |                      |                |
| General area                           | 12.5                | 24.3              | 11.5              | 7.0              | 12.1                       | 7.5              | 5.1                | 6.7          | 2.1                  | 11.0           |
| Special area                           | 10.8                | 12.5              | 6.0               | 1.8              | 3.3                        | 19.8             | 2.7                | 23.0         | **0.3                | 12.0           |
| Collection point<br>other than<br>dump | 3.5                 | 3.0               | **2.9             | **0.9            | **0.9                      | 13.0             | 2.3                | 10.5         | 1.3                  | 6.6            |
| Poured down<br>the drain               | **0.7               | **1.0             | **0.2             | **0.1            | **                         | **0.1            | **                 | **0.4        | 25.5                 | 11.0           |
| Taken to a<br>business/shop            | 2.0                 | **0.9             | **1.7             | **0.4            | 2.0                        | 41.1             | 2.5                | 22.9         | 29.2                 | 24.9           |
| Buried                                 | **1.3               | 1.1               | **0.4             | **0.4            | **0.7                      | 1.5              | 0.9                | 4.0          | 1.3                  | 2.3            |
| Other                                  | 2.6                 | 1.9               | **0.9             | **0.7            | **0.8                      | 4.2              | **0.6              | 18.7         | 2.0                  | 6.6            |

(a) Totals do not equal the sum of items in each column because more than one method may be specified.

Source: *Environmental Issues: People's Views and Practices (4602.0)*.

## Expenditure on protection of the environment

Statistics on environment protection expenditure are indicative of the response of various sectors to environment protection regulations and policies. They also provide some

indication of the demand for goods and services provided by the environment management industry. Estimates for expenditure on environmental protection in 1992–93 and 1993–94 are summarised by sector in table 14.9. The total environment protection expenditure was equivalent to 1.6% of Gross Domestic Product (GDP) in 1992–93 and 1.5% in 1993–94.

## 14.9 ESTIMATES OF ENVIRONMENT PROTECTION COSTS

|                                                  | 1992-93        | 1993-94        |
|--------------------------------------------------|----------------|----------------|
|                                                  | \$m            | \$m            |
| <b>PUBLIC SECTOR</b>                             |                |                |
| Sanitation and protection of the environment(a)  |                |                |
| Capital                                          | 1 106          | 1 008          |
| Current                                          | 774            | 761            |
| Total                                            | 1 880          | 1 769          |
| Other identified environment protection costs(b) | 1 073.5        | 1 172.1        |
| Gas and electricity utilities                    |                |                |
| Capital                                          | 80.9           | 56.9           |
| Current                                          | 86.8           | 79.7           |
| Total                                            | 167.7          | 136.6          |
| <i>Total public sector</i>                       | <i>3 121.2</i> | <i>3 077.7</i> |
| <b>PRIVATE SECTOR</b>                            |                |                |
| Agriculture(c)                                   | 96.3           | 112.1          |
| Mining                                           |                |                |
| Capital                                          | 48.3           | 57.1           |
| Current                                          | 95.7           | 128.8          |
| Total                                            | 144            | 185.9          |
| Manufacturing                                    |                |                |
| Capital                                          | 421.6          | 227.8          |
| Current                                          | 574.2          | 473.7          |
| Total                                            | 995.7          | 701.5          |
| Service and other industries(d)                  |                |                |
| Current                                          | 348.6          | 451.1          |
| Household sector(e)                              | 1 724          | 1 978          |
| <i>Total private sector</i>                      | <i>3 308.6</i> | <i>3 428.6</i> |
| <b>Total</b>                                     | <b>6 429.8</b> | <b>6 506.3</b> |

(a) Refers to outlays recorded in ABS Government Finance statistics. (b) Expenditure derived from Commonwealth and State budget papers, and departmental annual reports. Combined capital and current figure. (c) Capital/current split not available. (d) Current expenditure only collected. (e) In line with National Accounts concepts, all household expenditure is treated as current expenditure.

Source: *Environment Protection Expenditure* (4603.0).

Capital expenditure on pollution abatement and control in the manufacturing sector is defined as 'expenditure on any element of the production process specifically attributable to protecting the environment by reduction or elimination of pollutants and wastes'. Expenditure to protect the environment accounted for 0.6% and 0.4% of total turnover by manufacturing industries for 1992-93 and 1993-94 respectively. Table 14.10 presents a summary by industry subdivision within the manufacturing sector.

An overall decrease of 30% in expenditure to protect the environment between 1992-93 and 1993-94 is mostly attributed to a substantial fall in capital expenditure in 1993-94 (capital expenditure was \$227.8 million compared with \$421.6 million in 1992-93). Falls were most notable in the Petroleum, coal, chemical and

associated product manufacturing subdivision (spending was \$34.4 million in 1993-94 compared with \$108.7 million in 1992-93), and the Metal product manufacturing subdivision (spending was \$73.3 million in 1993-94 compared with \$210.1 million in 1992-93).

The Metal product manufacturing subdivision accounted for 45% (\$449.3 million) in 1992-93 and 35% (\$245.4 million) in 1993-94 of total pollution abatement and control expenditure, with the Petroleum, coal, chemical and associated products manufacturing subdivision accounting for 21% (\$203.7 million) in 1992-93 and 20% (\$139.8 million) in 1993-94.

Changes to survey methodology and collection units, as well as high standard errors, may have contributed to variations in expenditure between 1992-93 and 1993-94.

## 14.10 ENVIRONMENT PROTECTION EXPENDITURE, By Industry

| ANZSIC code  | Industry                                         | Capital expenditure<br>\$m | Current expenditure<br>\$m | Total<br>\$m |
|--------------|--------------------------------------------------|----------------------------|----------------------------|--------------|
| 1992–93      |                                                  |                            |                            |              |
| 21           | Food, beverage and tobacco                       | 29.4                       | 87.6                       | 117.0        |
| 22           | Textile, clothing, footwear and leather          | 5.3                        | 23.9                       | 29.3         |
| 23           | Wood and paper product                           | 35.9                       | 38.3                       | 74.2         |
| 24           | Printing, publishing and recorded media          | 2.8                        | 9.4                        | 12.2         |
| 25           | Petroleum, coal, chemical and associated product | 108.7                      | 95.0                       | 203.7        |
| 26           | Non-metallic mineral product                     | 19.0                       | 24.5                       | 43.5         |
| 27           | Metal product                                    | 210.1                      | 239.1                      | 449.3        |
| 28           | Machinery and equipment                          | 9.6                        | 48.3                       | 57.9         |
| 29           | Other manufacturing                              | 0.8                        | 7.9                        | 8.6          |
| <b>21–29</b> | <b>Total manufacturing</b>                       | <b>421.5</b>               | <b>574.2</b>               | <b>995.7</b> |
| 1993–94      |                                                  |                            |                            |              |
| 21           | Food, beverage and tobacco                       | 45.1                       | 79.2                       | 124.4        |
| 22           | Textile, clothing, footwear and leather          | 2.7                        | 15.7                       | 18.5         |
| 23           | Wood and paper product                           | 42.4                       | 18.5                       | 61.0         |
| 24           | Printing, publishing and recorded media          | 3.4                        | 8.7                        | 12.1         |
| 25           | Petroleum, coal, chemical and associated product | 34.4                       | 105.3                      | 139.8        |
| 26           | Non-metallic mineral product                     | 10.4                       | 24.5                       | 34.9         |
| 27           | Metal product                                    | 10.4                       | 172.1                      | 245.4        |
| 28           | Machinery and equipment                          | 73.3                       | 43.9                       | 59.4         |
| 29           | Other manufacturing                              | 15.5                       | 5.7                        | 6.2          |
| <b>21–29</b> | <b>Total manufacturing</b>                       | <b>227.8</b>               | <b>473.7</b>               | <b>701.5</b> |

Source: *Environment Protection Expenditure (4603.0)*.

## Transport and the environment

Transport systems have a significant role in Australia's economic life. The transport industry accounted for 6% of Gross Domestic Product (GDP) in 1995–96, and for 4.6% of total employment at February 1997. Transport, however, has significant detrimental effects on the Australian environment, including impacts on air quality, land and marine resources, energy resources and human and wildlife environments. Some of the pressures and impacts of transport on the environment are described in this section.

## Energy consumption

Energy consumption by the transport industry contributes to pressures on air quality and

limited fossil fuel resources. In 1995–96 transport was Australia's largest energy end-use industry, consuming 26% of energy used. The relative fuel consumption for the main transport modes for the period 1973–74 to 1995–96 is shown in table 14.11. Over this period the energy consumed by road and air transport increased markedly, with road transport rising by 91%, and air by 71%. In contrast, energy consumption by water transport fell by 48% during the period, although in recent years it has begun to increase, rising by 39% between 1993–94 and 1994–95. Energy consumption by rail transport fluctuated slightly over the period.

## 14.11 ENERGY CONSUMPTION, By Mode and Fuel Type

|                        | 1973-74      | 1979-80      | 1985-86      | 1987-88      | 1989-90        | 1991-92        | 1993-94        | 1995-96        |
|------------------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------|----------------|
|                        | petajoules   | petajoules   | petajoules   | petajoules   | petajoules     | petajoules     | petajoules     | petajoules     |
| Road transport         |              |              |              |              |                |                |                |                |
| Leaded petrol          | 422.5        | 506.9        | 527.6        | 482.6        | 427.6          | 359.3          | 304.2          | 243.1          |
| Unleaded petrol        | 0.0          | 0.0          | 18.4         | 82.3         | 161.3          | 219.5          | 290.9          | 365.0          |
| Auto diesel oil        | 47.6         | 101.1        | 161.3        | 179.3        | 200.1          | 197.5          | 213.1          | 235.3          |
| LPG                    | 1.0          | 3.8          | 12.4         | 17.6         | 22.4           | 33.1           | 43.8           | 56.1           |
| Natural gas            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0            | 0.5            | 0.7            | 1.0            |
| Total                  | 471.1        | 611.8        | 719.6        | 761.9        | 811.4          | 809.7          | 852.8          | 900.4          |
| Rail transport         |              |              |              |              |                |                |                |                |
| Auto diesel oil        | 25.0         | 28.1         | 24.9         | 25.3         | 23.3           | 22.3           | 21.8           | 22.3           |
| Electricity            | 2.5          | 2.7          | 4.0          | 4.7          | 5.7            | 5.9            | 6.0            | 6.6            |
| Industrial diesel fuel | 0.0          | 0.0          | 2.6          | 2.6          | 1.7            | 1.7            | 1.1            | 0.0            |
| Other fuels(a)         | 0.3          | 0.2          | 0.0          | 0.1          | 0.0            | 0.1            | 0.1            | 0.1            |
| Total                  | 27.8         | 31.0         | 31.6         | 32.6         | 30.7           | 29.9           | 29.0           | 28.9           |
| Water transport        |              |              |              |              |                |                |                |                |
| Auto diesel oil        | 4.7          | 9.7          | 4.2          | 7.1          | 6.2            | 5.7            | 7.0            | 11.3           |
| Industrial diesel fuel | 17.0         | 15.7         | 5.8          | 5.0          | 4.2            | 3.1            | 2.3            | 1.8            |
| Fuel oil               | 99.5         | 72.3         | 41.4         | 43.3         | 41.7           | 35.1           | 32.6           | 46.6           |
| Other fuels            | 0.0          | 0.0          | 3.3          | 3.5          | 3.5            | 4.0            | 3.9            | 3.8            |
| Total                  | 121.3        | 97.6         | 54.8         | 58.9         | 55.6           | 47.9           | 45.9           | 63.6           |
| Air transport          |              |              |              |              |                |                |                |                |
| Aviation gasoline      | 3.5          | 3.8          | 3.6          | 3.9          | 4.3            | 3.3            | 3.4            | 3.3            |
| Aviation turbine fuel  | 60.9         | 76.8         | 89.3         | 102.5        | 104.3          | 127.3          | 141.1          | 172.1          |
| Total                  | 64.4         | 80.6         | 92.8         | 106.4        | 108.6          | 130.6          | 144.4          | 175.5          |
| <b>Total(b)</b>        | <b>684.6</b> | <b>821.0</b> | <b>898.8</b> | <b>959.8</b> | <b>1 006.3</b> | <b>1 018.1</b> | <b>1 072.1</b> | <b>1 168.4</b> |

(a) Other fuels include black coal and natural gas. (b) Other transport, services and storage not included.

Source: Australian Bureau of Agricultural and Resource Economics, 1997.

## Transport use

The choices people make in using the transport system affect the extent of pressures placed on the environment. The results of an ABS household survey conducted in 1996 showed that most people travel to work or study as a single driver in a car (about 64%). Other results from the survey are summarised in table 14.12.

People in New South Wales use public transport (primarily trains and buses) most as a means of travelling to work or study (22%), while people in Tasmania use it least (8%). A larger proportion (13%) of the Australian Capital Territory residents use the bus system as a means of getting to work or study than do residents in other States and Territories.

**14.12 PERSONS WHO TRAVEL TO WORK/STUDY, Means of Transport — April 1996(a)**

|                            | NSW            | Vic.           | Qld            | SA           | WA           | Tas.         | NT          | ACT          | Aust.          |
|----------------------------|----------------|----------------|----------------|--------------|--------------|--------------|-------------|--------------|----------------|
| NUMBER ('000)              |                |                |                |              |              |              |             |              |                |
| Train                      | 337.3          | 183.9          | 65.8           | 21.5         | 46.0         | n.a.         | n.a.        | n.a.         | 654.5          |
| Bus                        | 235.9          | 86.5           | 74.6           | 57.3         | 53.0         | 15.1         | **3.6       | 19.8         | 545.7          |
| Car/truck/van as driver    | 1 917.3        | 1 579.7        | 1 074.1        | 486.0        | 608.2        | 154.4        | 56.0        | 116.3        | 5 991.9        |
| Car/truck/van as passenger | 161.2          | 108.8          | 111.0          | 59.6         | 73.2         | 17.5         | **6.1       | 15.4         | 552.8          |
| Motorbike or motor scooter | 27.0           | 18.2           | 27.0           | 12.2         | 9.0          | **1.4        | **1.0       | **3.4        | 99.4           |
| Bicycle                    | 54.2           | 57.6           | 49.1           | 23.6         | 17.6         | **4.0        | **4.2       | **4.9        | 215.2          |
| Walk                       | 168.3          | 122.1          | 87.2           | 34.7         | 40.3         | 20.6         | **5.1       | 9.0          | 487.4          |
| Other                      | 40.6           | 80.5           | 16.5           | **5.8        | **6.1        | **1.5        | **2.2       | **           | 153.1          |
| <b>Total</b>               | <b>2 610.8</b> | <b>1 965.5</b> | <b>1 356.7</b> | <b>618.8</b> | <b>756.6</b> | <b>193.2</b> | <b>69.3</b> | <b>152.2</b> | <b>7 723.1</b> |
| PROPORTION (%)             |                |                |                |              |              |              |             |              |                |
| Train                      | 12.9           | 9.4            | 4.8            | 3.5          | 6.1          | n.a.         | n.a.        | n.a.         | 8.5            |
| Bus                        | 9.0            | 4.4            | 5.5            | 9.3          | 7.0          | 7.8          | **5.2       | 13.0         | 7.1            |
| Car/truck/van as driver    | 73.4           | 80.4           | 79.2           | 78.5         | 80.4         | 79.9         | 80.8        | 76.4         | 77.6           |
| Car/truck/van as passenger | 6.2            | 5.5            | 8.2            | 9.6          | 9.7          | 9.0          | **8.8       | 10.1         | 7.2            |
| Motorbike or motor scooter | 1.0            | 0.9            | 2.0            | 2.0          | 1.2          | **0.7        | **1.5       | **2.2        | 1.3            |
| Bicycle                    | 2.1            | 2.9            | 3.6            | 3.8          | 2.3          | **2.1        | **6.0       | **3.2        | 2.8            |
| Walk                       | 6.4            | 6.2            | 6.4            | 5.6          | 5.3          | **10.7       | **7.4       | 5.9          | 6.3            |
| Other                      | 1.6            | 4.1            | 1.2            | **0.9        | **0.8        | **0.8        | **3.1       | **           | 2.0            |

(a) Totals do not equal the sum of items in each column because more than one transport mode may be specified.

Source: *Environmental Issues: People's Views and Practices (4602.0)*.

## Greenhouse gas emissions

Table 14.13 details greenhouse gas emissions contributed by the various transport modes, as compiled in the Australian National Greenhouse Gas Inventory. These figures show that, of the transport modes, road transport emits by far the largest volume of greenhouse gases. Emissions of CO<sub>2</sub> by road transport totalled 55 million tonnes in 1994, compared to the next highest (by air transport) of 9 million tonnes. This represented an increase of 11% in CO<sub>2</sub> emissions for road transport since 1988, and a

36% increase for air transport. Emissions of CO<sub>2</sub> decreased over this period for rail and marine transport, by 18% and 20% respectively.

Levels of non-CO<sub>2</sub> emissions have varied between 1988 and 1994, depending on transport mode and particular greenhouse gas. However, over this period there has been a drop in each of the non-CO<sub>2</sub> greenhouse gas emissions, except N<sub>2</sub>O, for road transport (the largest emitter of non-CO<sub>2</sub> greenhouse gases of all the transport modes).

14.13    AUSTRALIAN GREENHOUSE GAS EMISSIONS, By Mode

|        | CO <sub>2</sub> | CH <sub>4</sub> | N <sub>2</sub> O | NO <sub>x</sub> | CO         | NMVO <sub>C</sub> |
|--------|-----------------|-----------------|------------------|-----------------|------------|-------------------|
| Mode   | kilotonnes      | kilotonnes      | kilotonnes       | kilotonnes      | kilotonnes | kilotonnes        |
| 1988   |                 |                 |                  |                 |            |                   |
| Road   | 49 518.0        | 25.0            | 2.8              | 372.0           | 5 161.5    | 639.8             |
| Rail   | 1 927.0         | 0.1             | 0.1              | 42.6            | 5.6        | 2.0               |
| Marine | 4 556.0         | 2.4             | 0.1              | 103.9           | 119.3      | 22.5              |
| Air    | 6 745.0         | 1.1             | 0.2              | 50.3            | 91.4       | 5.1               |
| 1990   |                 |                 |                  |                 |            |                   |
| Road   | 52 766.0        | 25.2            | 5.0              | 371.3           | 4 901.6    | 620.1             |
| Rail   | 1 704.0         | 0.1             | 0.1              | 37.8            | 5.0        | 1.8               |
| Marine | 4 280.0         | 2.4             | 0.1              | 97.6            | 123.5      | 23.0              |
| Air    | 6 900.0         | 1.1             | 0.2              | 51.3            | 104.2      | 5.5               |
| 1992   |                 |                 |                  |                 |            |                   |
| Road   | 52 615.0        | 21.9            | 6.9              | 328.4           | 3 840.0    | 523.4             |
| Rail   | 1 635.0         | 0.1             | 0.0              | 36.3            | 4.8        | 1.7               |
| Marine | 3 727.0         | 2.4             | 0.1              | 82.2            | 121.0      | 22.3              |
| Air    | 8 663.0         | 1.3             | 0.3              | 65.3            | 85.5       | 5.9               |
| 1994   |                 |                 |                  |                 |            |                   |
| Road   | 55 168.0        | 20.7            | 8.7              | 316.3           | 3 241.2    | 477.6             |
| Rail   | 1 587.0         | 0.1             | 0.0              | 35.2            | 4.6        | 1.6               |
| Marine | 3 646.0         | 2.4             | 0.1              | 79.6            | 124.3      | 22.7              |
| Air    | 9 178.0         | 1.4             | 0.3              | 69.2            | 88.8       | 6.2               |

Source: Adapted from National Greenhouse Gas Inventory Committee 1996a, 1996b, 1996c, 1996d in *Australian Transport and the Environment* (4605.0).

Oil spills

Shipping is a significant source of oil pollution in Australian waters, as a result of accidental discharges and spills by vessels. Spilling of oil can be caused by such incidents as groundings and collisions, or during bunkering resulting from overflow of tanks, burst hoses, and so on. In 1995–96 the Australian Maritime Safety Authority (AMSA) recorded 349 sightings of oil discharges and spills in Australian waters. The vast majority of spills involved small quantities. About 85% of all reported spills involve less than 10 litres of oil.

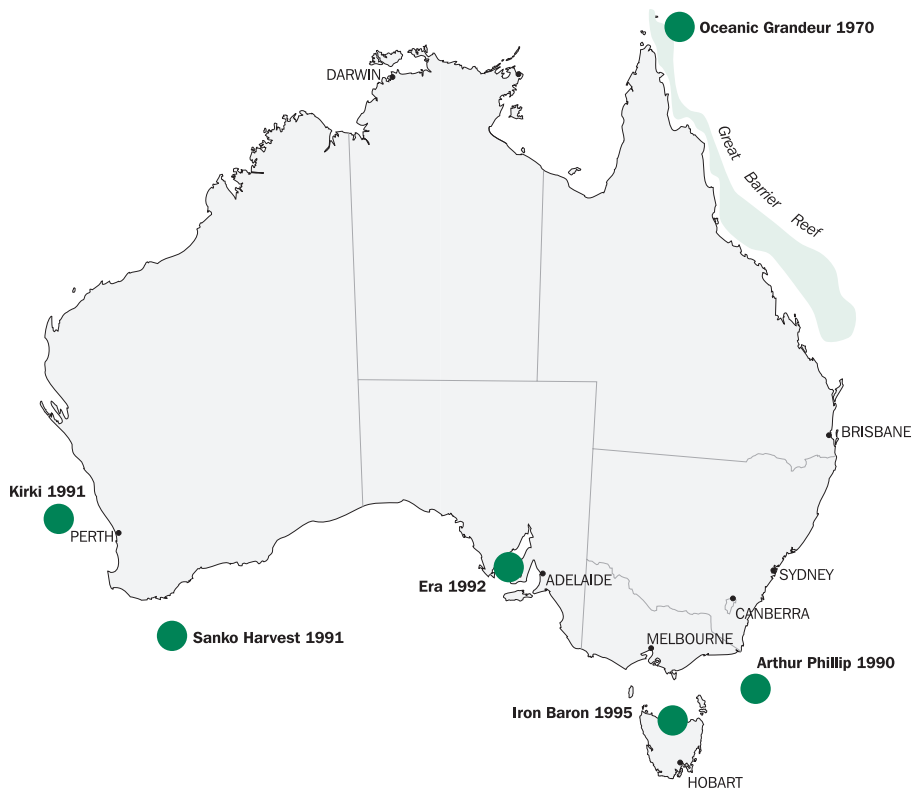
Australia has only experienced one major oil spill (over 1,000 tonnes) in the five years since 1991–92. The spill occurred off Cervantes in Western Australia when the *Kirki* lost 17,700 tonnes of oil in 1991. Most recently, the *Iron Baron* went aground off the Tasmanian coast in

July 1995, spilling about 325 tonnes of oil which covered over 15 kilometres of coastline.

Shipping oil discharges can often have serious impacts on marine wildlife. The *Iron Baron* disaster resulted in the oiling of more than 2,000 penguins, 300 of which died, and 60 cormorants, of which 30 died (Australian Maritime Safety Authority, in Department of Environment, Sport and Territories, 1996). Seals often suffer, as they ingest oil by grooming and by taking oiled prey. The extent of environmental impact of an oil spill will depend to a large degree on its timing, location and prevailing weather conditions. In the case of the *Iron Baron*, for example, fortuitous timing meant that migratory waders were yet to arrive in the area, and the breeding season was still some way off (Bayly-Stark, 1996). The location of major oil spills is illustrated in map 14.14.



### 14.14 LOCATION OF MAJOR OIL SPILLS



Source: Department of Environment, Sport & Territories.

### Aircraft noise

Whereas other noise sources are dispersed in nature, aircraft noise exposure is concentrated in a relatively small area affecting the human environment. The airport with the most severe effects is Sydney.

Governments address the problem of aircraft noise in a number of ways. Regulations control the levels of noise which can be emitted from aircraft and airports. The siting and location of new buildings in areas near airports is also subject to controls. In addition, curfews apply for arrivals and departures at major airports.

In Australia, noise exposure levels are calculated in Australian Noise Exposure Forecast (ANEF) units. The ANEF system is based on survey evidence of the reaction of Australian communities to aircraft noise, and incorporates

a number of variables including:

- the noise levels produced by the various aircraft operating at an airport; and
- a logarithmic function of the daily average number of aircraft noise events.

### Distribution of motor vehicles using leaded petrol

A census of motor vehicles was conducted by the ABS in 1995. The fuel type used by each vehicle was collected as part of the census. Vehicles using leaded petrol contribute 90% of lead pollutants in major urban areas. Since 1986 regulations have been introduced to ensure that all new motor vehicles consume lead free fuel. Over time the proportion of vehicles consuming leaded fuel has declined as older vehicles are replaced.

In Sydney, vehicles using leaded petrol are concentrated in the western suburbs. This area of Sydney is generally associated with lower income groups. A similar, though weaker, association between low income and motor vehicles using leaded petrol is observed in Melbourne and Brisbane. Low income earners are least expected to purchase new motor vehicles, hence the concentration of older leaded vehicles in these areas.

## Environmental research and development

An extensive knowledge base and reliable data are necessary for assessing the quality of Australia's environment and for developing appropriate policy and management strategies. The increased resources devoted to environmental research and development in

recent years have contributed to an expansion of available information. Expenditure on environment-based research increased from \$463.7 million in 1992–93 to \$574.4 million in 1994–95. The number of person years devoted to research and development in the environment sector increased from 6,003 to 6,739 over the same period. Table 14.15 summarises, by socio-economic objectives, expenditure and human resources devoted to research and development in 1994–95.

The environment accounted for about 19% (\$370.1 million) of government expenditure and 4% (\$204.2 million) of non-government expenditure on research and development in 1994–95. This differs from the expenditure pattern on all other socio-economic objectives except defence, for which non-government sources contribute a larger proportion of resources.

**14.15 RESOURCES DEVOTED TO RESEARCH AND DEVELOPMENT, 1994–95**

|                                               | Government     |               | Non-government |               | Total          |               |
|-----------------------------------------------|----------------|---------------|----------------|---------------|----------------|---------------|
|                                               | \$m            | person years  | \$m            | person years  | \$m            | person years  |
| Defence                                       | 223.1          | 2 009         | 144.8          | 789           | 367.9          | 2 798         |
| Economic development                          | 1 041.0        | 10 052        | 3 419.0        | 30 563        | 4 459.9        | 40 614        |
| Society                                       | 257.9          | 3 112         | 643.5          | 11 650        | 901.4          | 14 761        |
| Advancement of knowledge                      | 72.6           | 680           | 944.9          | 20 568        | 1 017.5        | 21 248        |
| Environment                                   |                |               |                |               |                |               |
| Environmental knowledge                       | 206.5          | 1 732         | 114.6          | 2 255         | 321.1          | 3 986         |
| Environmental aspects of economic development | 108.4          | 1 051         | 48.5           | 621           | 156.9          | 1 663         |
| Environmental management and other aspects    | 55.2           | 508           | 41.1           | 581           | 96.4           | 1 090         |
| Total environment                             | 370.1          | 3 281         | 204.2          | 3 458         | 574.4          | 6 739         |
| <b>Total</b>                                  | <b>1 964.7</b> | <b>19 134</b> | <b>5 356.4</b> | <b>67 028</b> | <b>7 321.1</b> | <b>86 162</b> |

Source: *Research and Experimental Development, All Sector Summary, Australia (8112.0)*.

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## Introduction

The development of Australian agricultural industries has been determined by interacting factors such as the opening up of new land, the development of transport facilities and profitable markets, and technical and scientific achievements. Until the late 1950s, agricultural products accounted for more than 80% of the value of Australia's exports. Since then, the proportion of Australia's exports from the agricultural sector has declined markedly as the Australian economy has become increasingly diverse, and the quantity and value of production of the mining and manufacturing sectors have expanded (this decline in importance has not been due to a decline in agricultural activity, as agricultural output has increased over this period).

Consequently agriculture's direct contribution to Gross Domestic Product (GDP) has been declining and is currently 3%. Nevertheless agriculture is still a vital and thriving sector and occupies a significant place in global rural trade, with wool, beef, wheat and sugar being particularly important in volume terms. Australia is also an important source of dairy produce, fruit, cotton, rice and flowers.

## The agricultural environment

Australia is a relatively flat continent, with mean elevation just exceeding 200 metres. The dominant feature of the continent is the Great Dividing Range which spans the length of the Eastern seaboard. There are very few naturally good soils for agriculture. Most are infertile and shallow with deficiencies in phosphorus and/or nitrogen. To offset these deficiencies superphosphate and nitrogenous fertilisers are widely used, particularly on pasture and cereal crops. Fragile soil structure and a susceptibility to waterlogging are other common features of Australian soils, while large areas are naturally affected by salt or acidity. These soil characteristics restrict particular agricultural activities or rule out agricultural activity altogether.

With the exception of Antarctica, Australia is the world's driest continent. The wet northern summer is suited to beef cattle grazing inland and the growing of sugar and tropical fruits in coastal areas. The drier summer conditions of southern Australia favour wheat and other dryland cereal farming, sheep grazing and dairy

cattle (in the higher rainfall areas) as well as beef cattle. Within regions there also exists a high degree of rainfall variability from year to year, which is most pronounced in the arid and semi-arid regions. Rainfall variability often results in lengthy periods without rain (dry spells) and drought. The seasonality and variability of rainfall in Australia require that water be stored, and 70% of the stored water resource (including ground water) is consumed by the agricultural sector. Storage ensures that there are adequate supplies all year round for those agricultural activities requiring a continuous supply. Irrigation has opened up areas of Australia to agricultural activities which otherwise would have not been suitable for agriculture.

Evaporation is another important element of Australia's environment affecting agricultural production. Hot summers are accompanied by an abundance of sunlight. This combination of climate variables leads to rates of evaporation which are high relative to those in other continents. Areas that have been cleared for crop and pasture production tend to coincide with five to nine months effective rainfall (where rainfall exceeds evaporation) per year. In areas of effective rainfall of more than nine months, generally only higher value crops or tropical crops and fruits are grown, while in areas with effective rainfall of less than five months, cropping is usually restricted to areas that are irrigated.

Since European settlement the vegetation of Australia has been altered significantly. In particular, large areas of Australia's forest and woodland vegetation systems have been cleared, predominantly for agricultural activity. The areas that have been altered most are those which have been opened up to cultivation or intensive grazing. Other areas, particularly in the semi-arid regions where extensive grazing of native grasses occurs, now show signs of returning to timber and scrub.

## Agricultural improvements

### Irrigation

Most crops require a minimum amount of annual rainfall to grow successfully without irrigation. The variability in stream flow and annual rainfall which are features of the Australian environment means that successful irrigation of crops and pastures is dependent on storage. Ground water supplies are used in areas

## 15.1 AREA OF CROPS AND PASTURES IRRIGATED

|                                  | Australia    |              |              |              |            |            |            |           |           |          | 1994     |
|----------------------------------|--------------|--------------|--------------|--------------|------------|------------|------------|-----------|-----------|----------|----------|
|                                  | 1992         | 1993         | 1994         | NSW          | Vic.       | Qld        | SA         | WA        | Tas.      | NT       | ACT      |
|                                  | '000 ha      | '000 ha      | '000 ha      | '000 ha      | '000 ha    | '000 ha    | '000 ha    | '000 ha   | '000 ha   | '000 ha  | '000 ha  |
| Pastures                         | 1 081        | 1 184        | 1 362        | 635          | 556        | 70         | 53         | 14        | 33        | 1        | —        |
| Cereals                          | 275          | 311          | 364          | 284          | 23         | 45         | 7          | 1         | 2         | 1        | —        |
| Vegetables for human consumption | 93           | 89           | 96           | 17           | 20         | 27         | 9          | 6         | 16        | —        | —        |
| All fruits                       | 120          | 125          | 144          | 33           | 35         | 25         | 40         | 7         | 3         | 1        | —        |
| All other crops                  | 356          | 245          | 275          | 176          | 13         | 73         | 4          | 3         | 6         | —        | —        |
| Sugar cane                       | 146          | 154          | 168          | (a)          | (a)        | 168        | (a)        | (a)       | (a)       | (a)      | (a)      |
| <b>Total</b>                     | <b>2 069</b> | <b>2 107</b> | <b>2 408</b> | <b>1 145</b> | <b>646</b> | <b>409</b> | <b>112</b> | <b>32</b> | <b>61</b> | <b>3</b> | <b>—</b> |

(a) Not classified.

Source: AgStats (7117.0).

where the quantity is adequate and the quality is suitable. The area of land irrigated, about 2.4 million hectares in 1994 (see table 15.1), although less than 1% of the total land used for agriculture, represented about 6% of land under crops and 5% of the total area under crops and pastures. Most irrigated land is located within the confines of the Murray–Darling Basin, which covers parts of New South Wales, Victoria, Queensland and South Australia.

## Fertilisers

Most Australian soils are deficient in phosphorus. Because of this and the significant but less widespread deficiency of sulphur in many soils, phosphate fertilisers, particularly single strength superphosphate, account for the bulk of fertiliser use (see table 15.2). Over half of superphosphate is used on pastures in areas with moderate to good rainfall. Large quantities are also used on cereal crops. Nitrogen deficiency is also generally evident in Australian soils and the use of nitrogenous fertilisers is

increasing. Potassium deficiency is confined mainly to soils in the higher rainfall areas which are intensively cropped or used for irrigated pastures.

## Characteristics of Australian farms

The gross product of agriculture, forestry and fishing in 1995–96 was \$16,701m, 3% of GDP. Agriculture constituted the major proportion of this total, as indicated by the fact that 394,200 of the 426,400 people employed on average in 1996 in the above group of industries were employed in Agriculture and Services to agriculture. As at August 1996, 5% of all employed persons were employed in Agriculture and Services to agriculture.

Table 15.3 provides information on the numbers and types of establishments with agricultural activity at 31 March 1996.

## 15.2 ARTIFICIAL FERTILISERS, Area and Usage

| Year    | Area fertilised | Superphosphate used | Nitrogenous fertilisers used | Other fertilisers used |
|---------|-----------------|---------------------|------------------------------|------------------------|
|         | '000 ha         | '000 t              | '000 t                       | '000 t                 |
| 1990–91 | 23 627          | (a)                 | (a)                          | (b)3 239               |
| 1991–92 | 19 517          | (a)                 | (a)                          | (b)2 678               |
| 1992–93 | 19 702          | (a)                 | (a)                          | (b)2 761               |
| 1993–94 | 20 529          | (a)                 | (a)                          | (b)3 000               |
| 1994–95 | (c)             | (c)                 | (c)                          | (c)                    |
| 1995–96 | 28 415          | 1 614               | 880                          | 1 311                  |

(a) Not collected separately. (b) Includes all fertiliser categories. (c) Not collected.

Source: Summary of Crops, Australia (7330.0).



## 15.3 ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY, Year Ending 31 March 1996

|                                                                                                    | NSW           | Vic.          | Qld           | SA            | WA            | Tas.         | NT         | ACT        | Aust.          |
|----------------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|--------------|------------|------------|----------------|
| <b>Establishments mainly engaged in agriculture, forestry and fishing industries</b>               |               |               |               |               |               |              |            |            |                |
| <b>Agriculture</b>                                                                                 |               |               |               |               |               |              |            |            |                |
| Plant nurseries                                                                                    | 679           | 287           | 696           | 125           | 156           | 38           | 21         | 3          | 2 005          |
| Cut flower and flower seed growing                                                                 | 215           | 209           | 189           | 125           | 130           | 46           | 6          | —          | 920            |
| Vegetable growing                                                                                  | 701           | 1 005         | 1 376         | 561           | 567           | 615          | 10         | 3          | 4 838          |
| Grape growing                                                                                      | 788           | 1 733         | 88            | 1 769         | 268           | 68           | 4          | 1          | 4 719          |
| Apple and pear growing                                                                             | 205           | 431           | 109           | 130           | 224           | 167          | —          | 4          | 1 270          |
| Stone fruit growing                                                                                | 471           | 256           | 89            | 330           | 164           | 23           | —          | —          | 1 333          |
| Kiwi fruit growing                                                                                 | 30            | 9             | 5             | —             | 9             | —            | —          | —          | 53             |
| Fruit growing n.e.c.                                                                               | 1 651         | 375           | 2 127         | 666           | 299           | 35           | 64         | 2          | 5 219          |
| Grain growing                                                                                      | 3 346         | 3 054         | 1 764         | 3 732         | 2 729         | 22           | 2          | —          | 14 649         |
| Grain-sheep/beef cattle farming                                                                    | 7 254         | 2 860         | 1 900         | 2 753         | 3 688         | 102          | 4          | —          | 18 561         |
| Sheep-beef cattle farming                                                                          | 4 779         | 3 084         | 1 022         | 1 084         | 628           | 443          | —          | 24         | 11 064         |
| Sheep farming                                                                                      | 5 171         | 4 691         | 771           | 1 468         | 1 759         | 635          | —          | 26         | 14 521         |
| Beef cattle farming                                                                                | 10 574        | 8 155         | 11 751        | 1 203         | 1 898         | 1 169        | 214        | 24         | 34 988         |
| Dairy cattle farming                                                                               | 2 047         | 7 933         | 1 912         | 825           | 463           | 791          | —          | 1          | 13 972         |
| Poultry farming (meat)                                                                             | 331           | 161           | 98            | 71            | 57            | 15           | 1          | —          | 734            |
| Poultry farming (eggs)                                                                             | 145           | 110           | 103           | 43            | 85            | 14           | 6          | 1          | 507            |
| Pig farming                                                                                        | 369           | 196           | 428           | 169           | 127           | 35           | 1          | —          | 1 325          |
| Horse farming                                                                                      | 558           | 333           | 524           | 106           | 110           | 44           | —          | —          | 1 675          |
| Deer farming                                                                                       | 99            | 106           | 55            | 50            | 40            | 38           | —          | —          | 388            |
| Livestock farming n.e.c.                                                                           | 973           | 805           | 668           | 216           | 162           | 87           | 7          | 9          | 2 927          |
| Sugar cane growing                                                                                 | 462           | —             | 4 603         | —             | —             | —            | —          | —          | 5 065          |
| Cotton growing                                                                                     | 464           | —             | 508           | —             | —             | —            | —          | —          | 972            |
| Crop and plant growing n.e.c.                                                                      | 265           | 353           | 585           | 136           | 77            | 77           | 3          | 1          | 1 497          |
| Total Agriculture                                                                                  | 41 577        | 36 146        | 31 371        | 15 562        | 13 640        | 4 464        | 343        | 99         | 143 202        |
| Services to agriculture; hunting and trapping                                                      | 69            | 53            | 39            | 43            | 30            | 11           | —          | —          | 245            |
| Forestry and logging                                                                               | 13            | 1             | 8             | —             | 6             | 14           | —          | —          | 42             |
| Commercial fishing                                                                                 | 2             | 1             | 3             | 7             | 9             | 7            | —          | —          | 29             |
| <b>Total establishments mainly engaged in agriculture, forestry and fishing industries</b>         | <b>41 661</b> | <b>36 201</b> | <b>31 421</b> | <b>15 612</b> | <b>13 685</b> | <b>4 496</b> | <b>343</b> | <b>99</b>  | <b>143 518</b> |
| <b>Establishments mainly engaged in other industries, but also with some agricultural activity</b> |               |               |               |               |               |              |            |            |                |
| Mining                                                                                             | 7             | 3             | 4             | 2             | 4             | 4            | —          | —          | 24             |
| Manufacturing                                                                                      | 60            | 43            | 14            | 36            | 24            | 5            | 1          | —          | 183            |
| Electricity, gas and water supply                                                                  | —             | 2             | —             | —             | —             | —            | —          | —          | 2              |
| Construction                                                                                       | 54            | 75            | 47            | 29            | 26            | 19           | —          | —          | 250            |
| Wholesale trade                                                                                    | 42            | 39            | 22            | 18            | 12            | 7            | —          | —          | 140            |
| Retail trade                                                                                       | 47            | 24            | 31            | 11            | 13            | 12           | 1          | 2          | 141            |
| Accommodation, cafes and restaurants                                                               | 17            | 11            | 8             | 5             | 7             | 6            | —          | —          | 54             |
| Transport and storage                                                                              | 62            | 90            | 43            | 46            | 23            | 23           | —          | —          | 287            |
| Communication services                                                                             | 1             | —             | —             | —             | —             | —            | —          | —          | 1              |
| Finance and insurance                                                                              | 8             | 2             | 1             | 4             | —             | 1            | —          | —          | 16             |
| Property and business services                                                                     | 63            | 16            | 44            | 22            | 21            | 7            | —          | —          | 173            |
| Government administration and defence                                                              | 9             | —             | —             | —             | —             | —            | —          | —          | 9              |
| Education                                                                                          | 14            | 1             | 8             | 1             | 15            | 5            | —          | 1          | 45             |
| Health and community services                                                                      | 6             | 2             | 7             | 1             | 1             | —            | —          | —          | 17             |
| Cultural and recreational services                                                                 | 14            | 17            | 4             | 7             | 4             | 3            | —          | —          | 49             |
| Personal and other services                                                                        | 5             | 2             | 9             | 2             | 7             | 1            | —          | —          | 26             |
| Unclassified(a)                                                                                    | 427           | 376           | 523           | 144           | 145           | 51           | 10         | 1          | 1 677          |
| <b>Total establishments with agricultural activity</b>                                             | <b>42 497</b> | <b>36 904</b> | <b>32 186</b> | <b>15 940</b> | <b>13 987</b> | <b>4 640</b> | <b>355</b> | <b>103</b> | <b>146 612</b> |

(a) Establishments which could not be classified to an industry because they undertook no agricultural activity during the year ended 31 March 1996.

Source: AgStats (7117.0).

## Employment in agriculture

Table 15.4 shows the average employment in Agriculture and Services to agriculture for each of the years 1992 to 1997.

## Gross value of agricultural commodities produced

Table 15.5 shows the gross value of agricultural commodities produced for the years 1990–91 to 1995–96. The value shown is the value of recorded production at the wholesale prices realised in the market place.

### 15.4 EMPLOYED PERSONS(a) IN AGRICULTURE AND SERVICES

|        | Married males | All males | Married females | All females | Persons |
|--------|---------------|-----------|-----------------|-------------|---------|
| August | '000          | '000      | '000            | '000        | '000    |
| 1992   | 179.1         | 261.4     | 96.2            | 117.2       | 378.5   |
| 1993   | 186.7         | 265.0     | 100.5           | 117.3       | 382.3   |
| 1994   | 180.5         | 257.6     | 97.5            | 118.7       | 376.3   |
| 1995   | 180.6         | 259.3     | 101.5           | 123.8       | 383.0   |
| 1996   | 185.1         | 272.1     | 99.5            | 122.1       | 394.2   |
| 1997   | 190.6         | 276.7     | 102.8           | 126.3       | 403.0   |

(a) The estimates of employed persons include persons who worked without pay for at least one hour per week in a family business or on a farm (that is, unpaid family helpers). Persons who worked in another industry and in agriculture are classified to the industry of predominant activity.

Source: ABS, unpublished data, Labour Force Survey.

### 15.5 GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED

|                                                             | 1990–91         | 1991–92         | 1992–93         | 1993–94         | 1994–95         | 1995–96p        |
|-------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Commodity                                                   | \$m             | \$m             | \$m             | \$m             | \$m             | \$m             |
| Crops                                                       |                 |                 |                 |                 |                 |                 |
| Barley for grain                                            | 568.3           | 680.9           | 801.8           | 844.9           | 622.2           | 1 276.4         |
| Oats for grain                                              | 147.3           | 178.3           | 208.8           | 147.9           | 165.8           | 289.4           |
| Wheat for grain                                             | 1 988.1         | 2 097.2         | 2 685.5         | 2 866.8         | 2 127.2         | 4 304.6         |
| Other cereal grains                                         | 304.9           | 473.3           | 340.1           | 537.5           | 580.2           | 710.6           |
| Sugar cane cut for crushing                                 | 748.0           | 602.7           | 800.9           | 944.6           | 1 207.7         | 1 232.7         |
| Fruit and nuts                                              | 1 059.6         | 1 304.1         | 1 402.9         | 1 316.7         | 1 426.3         | 1 506.3         |
| Grapes                                                      | 362.0           | 433.0           | 395.5           | 450.1           | 511.1           | 708.4           |
| Vegetables                                                  | 1 284.9         | 1 242.4         | 1 248.6         | 1 443.7         | 1 491.6         | 1 629.8         |
| All other crops(a)                                          | 2 611.5         | 2 853.8         | 2 853.2         | 2 963.8         | 2 999.6         | 3 716.1         |
| <i>Total crops</i>                                          | <i>9 074.6</i>  | <i>9 865.7</i>  | <i>10 737.3</i> | <i>11 515.9</i> | <i>11 131.7</i> | <i>15 396.7</i> |
| Livestock slaughterings and other disposals(b)              |                 |                 |                 |                 |                 |                 |
| Cattle and calves(c)                                        | 3 869.4         | 3 801.9         | 3 839.2         | 4 433.5         | 4 213.5         | 3 575.9         |
| Sheep and lambs                                             | 364.2           | 460.6           | 680.8           | 793.6           | 833.7           | 1 035.7         |
| Pigs                                                        | 691.0           | 658.6           | 649.5           | 660.5           | 630.6           | 597.8           |
| Poultry                                                     | 788.3           | 778.0           | 833.5           | 929.3           | 902.0           | 948.1           |
| <i>Total livestock slaughterings and other disposals(d)</i> | <i>5 721.0</i>  | <i>5 738.1</i>  | <i>6 032.7</i>  | <i>6 852.9</i>  | <i>6 615.7</i>  | <i>6 192.7</i>  |
| Livestock products                                          |                 |                 |                 |                 |                 |                 |
| Wool                                                        | 4 180.9         | 2 979.5         | 2 568.5         | 2 449.1         | 3 317.9         | 2 548.5         |
| Milk                                                        | 1 824.8         | 1 960.0         | 2 314.4         | 2 448.0         | 2 419.1         | 2 993.5         |
| Eggs                                                        | 321.1           | 278.1           | 286.5           | 233.9           | 230.6           | 266.7           |
| <i>Total livestock products(e)(f)</i>                       | <i>6 354.3</i>  | <i>5 244.0</i>  | <i>5 207.5</i>  | <i>5 166.7</i>  | <i>5 993.7</i>  | <i>5 851.4</i>  |
| <b>Total value of agricultural commodities produced(g)</b>  | <b>21 158.5</b> | <b>20 861.3</b> | <b>21 990.6</b> | <b>23 547.2</b> | <b>23 750.3</b> | <b>27 451.9</b> |

(a) Includes pastures and grasses. Excludes crops for green feed or silage. (b) Includes net exports of livestock. (c) Includes dairy cattle slaughtered. (d) Includes goat slaughterings and Tasmanian pigs and poultry. (e) Includes honey and beeswax. (f) Excludes Northern Territory milk and eggs. (g) Includes pigs, poultry, milk and eggs in the Northern Territory.

Source: Value of Agricultural Commodities Produced, Australia (7503.0), Value of Principal Agricultural Commodities Produced, Australia, Preliminary (7501.0).

**15.6 INDEX OF VALUES(a) OF AGRICULTURAL COMMODITIES PRODUCED, At Constant Prices**

| Commodity                                          | 1989-90      | 1990-91      | 1991-92     | 1992-93      | 1993-94      | 1994-95     |
|----------------------------------------------------|--------------|--------------|-------------|--------------|--------------|-------------|
| <b>Crops</b>                                       |              |              |             |              |              |             |
| Barley for grain                                   | 100.0        | 101.6        | 112.0       | 133.5        | 164.9        | 72.0        |
| Oats for grain                                     | 100.0        | 93.3         | 103.0       | 118.1        | 100.4        | 56.3        |
| Wheat for grain                                    | 100.0        | 105.6        | 72.9        | 101.9        | 113.9        | 61.5        |
| Other cereal grains                                | 100.0        | 85.9         | 137.9       | 85.7         | 116.6        | 110.6       |
| Sugar cane(b)                                      | 100.0        | 94.0         | 83.1        | 108.9        | 116.5        | 122.3       |
| Fruit and nuts                                     | 100.0        | 95.9         | 100.3       | 117.1        | 118.8        | 112.6       |
| Grapes                                             | 100.0        | 102.7        | 118.5       | 98.3         | 112.7        | 95.2        |
| Vegetables                                         | 100.0        | 104.2        | 105.0       | 104.2        | 115.9        | 110.5       |
| All other crops(c)                                 | 100.0        | 105.0        | 124.5       | 124.4        | 120.8        | 101.3       |
| Total crops                                        | 100.0        | 101.9        | 100.0       | 111.4        | 120.0        | 91.6        |
| <b>Livestock slaughterings and other disposals</b> |              |              |             |              |              |             |
| Cattle and calves(d)                               | 100.0        | 104.9        | 106.8       | 108.9        | 108.8        | 107.6       |
| Sheep and lambs                                    | 100.0        | 90.8         | 93.2        | 94.5         | 95.6         | 93.7        |
| Pigs                                               | 100.0        | 98.4         | 105.9       | 103.5        | 108.5        | 110.7       |
| Poultry                                            | 100.0        | 101.1        | 107.6       | 109.9        | 119.1        | 119.1       |
| Total livestock slaughterings(e)                   | 100.0        | 102.3        | 105.5       | 107.0        | 108.8        | 108.1       |
| <b>Livestock products</b>                          |              |              |             |              |              |             |
| Wool                                               | 100.0        | 96.9         | 80.4        | 78.2         | 75.5         | 66.6        |
| Milk                                               | 100.0        | 102.2        | 107.5       | 117.1        | 129.1        | 131.1       |
| Eggs                                               | 100.0        | 101.8        | 89.6        | 94.2         | 89.2         | 86.7        |
| Total livestock products(f)                        | 100.0        | 98.2         | 86.8        | 87.6         | 88.2         | 81.9        |
| <b>Total agricultural commodities produced</b>     | <b>100.0</b> | <b>100.8</b> | <b>97.0</b> | <b>102.4</b> | <b>106.6</b> | <b>92.5</b> |

(a) Indexes of values at constant prices (weighted by average unit values for 1989-90). (b) Sugar cane cut for crushing and planting. (c) Includes pasture and grasses. Excludes crops for green feed or silage. (d) Includes dairy cattle slaughtered. (e) Component series based on carcass weight. Includes goat slaughterings. (f) Includes honey, beeswax and goat products.

Source: *Value of Agricultural Commodities Produced, Australia (7503.0)*.

Table 15.6 shows the indexes of the gross value of commodities produced at constant prices, which are measures of change in value after the direct effects of price changes have been eliminated.

## Financial statistics of farm businesses

Estimates of selected financial aggregates of farm businesses are shown in tables 15.7 to 15.11 and graphs 15.12 and 15.13. The estimates have been derived from the Agricultural Finance Survey (AFS), conducted annually since 1986-87.

**15.7 FARM BUSINESSES, Selected Financial Aggregates**

|                                 | 1990-91  | 1991-92  | 1992-93  | 1993-94  | 1994-95  | 1995-96  |
|---------------------------------|----------|----------|----------|----------|----------|----------|
|                                 | \$m      | \$m      | \$m      | \$m      | \$m      | \$m      |
| Sales from crops                | 7 196.7  | 7 718.3  | 8 594.6  | 9 369.5  | 9 804.2  | 13 159.6 |
| Sales from livestock            | 4 864.5  | 4 905.3  | 5 431.1  | 6 232.5  | 6 279.1  | 6 339.7  |
| Sales from livestock products   | 5 853.6  | 4 753.6  | 4 770.9  | 4 637.3  | 5 596.3  | 4 975.1  |
| Turnover                        | 19 190.6 | 18 576.0 | 20 068.2 | 21 694.3 | 23 516.3 | 26 724.9 |
| Purchases and selected expenses | 10 892.5 | 10 726.3 | 11 392.6 | 12 541.1 | 13 517.0 | 14 948.6 |
| Value added(a)                  | 7 329.0  | 8 048.2  | 9 099.5  | 10 598.4 | 9 768.1  | 11 185.3 |
| Adjusted(b) value added(a)      | 6 004.4  | 6 737.8  | 7 753.3  | 9 178.5  | 8 234.3  | 9 552.5  |
| Gross operating surplus(a)      | 4 114.9  | 4 885.2  | 5 832.7  | 7 081.2  | 6 006.0  | 7 176.6  |
| Interest paid                   | 2 066.0  | 1 820.4  | 1 499.2  | 1 302.0  | 1 508.9  | 1 666.7  |
| Cash operating surplus(c)       | 3 412.8  | 3 095.0  | 4 083.2  | 4 433.3  | 4 835.7  | 6 429.3  |
| Net capital expenditure         | 1 216.6  | 1 420.8  | 1 660.2  | 1 945.0  | 2 090.8  | 2 307.9  |
| Gross indebtedness              | 14 140.6 | 14 819.2 | 15 390.5 | 15 921.7 | 18 267.7 | 19 592.7 |

(a) Includes an estimate for the increase (or decrease) in the value of livestock. (b) The estimate of value added less the estimates of rates and taxes, insurance payments and other expenses. (c) Excludes an estimate for the increase (or decrease) in the value of livestock.

Source: *Agricultural Industries, Financial Statistics, Australia (7507.0)*.

## 15.8 FARM BUSINESSES, Selected Financial Aggregates — 1995–96

|                                 | NSW     | Vic.    | Qld     | SA      | WA      | Tas.  | Aust.(a) |
|---------------------------------|---------|---------|---------|---------|---------|-------|----------|
|                                 | \$m     | \$m     | \$m     | \$m     | \$m     | \$m   | \$m      |
| Sales from crops                | 3 471.9 | 1 840.1 | 3 079.8 | 1 734.5 | 2 754.8 | 262.8 | 13 159.6 |
| Sales from livestock            | 1 965.5 | 1 098.4 | 1 828.7 | 557.1   | 618.0   | 155.3 | 6 339.7  |
| Sales from livestock products   | 1 349.8 | 1 849.8 | 486.2   | 373.1   | 708.4   | 205.3 | 4 975.1  |
| Turnover                        | 7 463.9 | 5 187.0 | 5 982.9 | 2 857.6 | 4 394.3 | 693.4 | 26 724.9 |
| Purchases and selected expenses | 4 365.4 | 3 012.5 | 3 273.3 | 1 403.1 | 2 417.0 | 399.6 | 14 948.6 |
| Value added(b)                  | 2 974.8 | 2 366.6 | 1 930.6 | 1 390.8 | 2 043.8 | 322.9 | 11 185.3 |
| Adjusted(c) value added(b)      | 2 441.0 | 2 063.4 | 1 589.4 | 1 227.4 | 1 806.9 | 280.3 | 9 552.5  |
| Gross operating surplus(b)      | 1 711.0 | 1 631.2 | 1 000.4 | 1 033.5 | 1 512.3 | 181.2 | 7 176.6  |
| Interest paid                   | 503.6   | 285.2   | 406.7   | 178.0   | 237.4   | 49.0  | 1 666.7  |
| Cash operating surplus(d)       | 1 413.5 | 1 208.2 | 1 455.7 | 953.2   | 1 276.5 | 109.6 | 6 429.3  |
| Net capital expenditure         | 535.4   | 322.3   | 532.6   | 305.7   | 557.7   | 40.9  | 2 307.9  |
| Gross indebtedness              | 5 582.4 | 2 969.8 | 5 055.9 | 1 849.9 | 3 485.7 | 533.8 | 19 592.7 |

(a) Includes the Northern Territory and the Australian Capital Territory. (b) Includes an estimate for the increase (or decrease) in the value of livestock. (c) The estimate of value added less the estimates of rates and taxes, insurance payments and other expenses. (d) Excludes an estimate for the increase (or decrease) in the value of livestock.

Source: *Agricultural Industries, Financial Statistics, Australia (7507.0)*.

## Turnover

Turnover (all gross proceeds received by the business during the year from the sale of crops, livestock, livestock products and other miscellaneous revenue) is a good guide to the level of farm business activity. In aggregate, the turnover by farm businesses for 1995–96 of \$26.7b was 14% higher than during 1994–95 (table 15.9). The average turnover per farm business increased by 13% to \$246.5 during 1995–96. The increase was due to a 34% increase in sales from crops, which in turn was due to the ending of the drought and maintenance of high prices.

In 1995–96, 23,600 or 22% of Australian farm businesses had a turnover of more than

\$300,000 and contributed 63% of the total turnover of all Australian farms. Their average turnover was \$717,748 and average cash operating surplus was \$179,125.

At the other end of the scale, 22,600 farms (21%) had a turnover of less than \$50,000. These farm businesses contributed only 2% of the total turnover, at an average of \$27,179. These farms had an average cash operating loss of \$2,339 per farm.

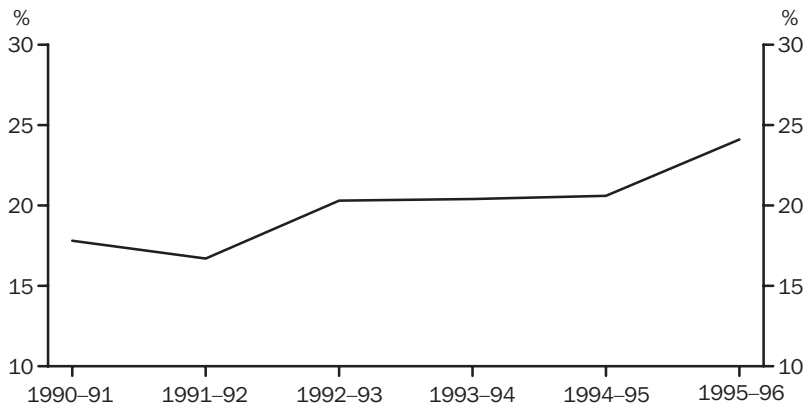
In 1995–96, the farm business profit margin (the ratio of cash operating surplus to turnover) was 24%, an increase from 21% in 1994–95 (graph 15.10).

## 15.9 FARM BUSINESSES, By Size of Turnover

| Size of turnover       | Number of farm businesses |              |              |              | Total turnover  |                 |                 |                 |
|------------------------|---------------------------|--------------|--------------|--------------|-----------------|-----------------|-----------------|-----------------|
|                        | 1992–93                   | 1993–94      | 1994–95      | 1995–96      | 1992–93         | 1993–94         | 1994–95         | 1995–96         |
|                        | '000                      | '000         | '000         | '000         | \$m             | \$m             | \$m             | \$m             |
| Less than \$50 000     | 23.7                      | 21.4         | 22.8         | 22.7         | 762.8           | 626.4           | 696.1           | 613.6           |
| \$50 000 to \$99 999   | 25.5                      | 24.0         | 22.2         | 20.0         | 1 918.6         | 1 622.3         | 1 678.1         | 1 560.1         |
| \$100 000 to \$149 999 | 18.3                      | 19.4         | 17.1         | 15.9         | 2 281.1         | 2 313.5         | 2 142.7         | 1 991.0         |
| \$150 000 to \$199 999 | 10.5                      | 12.4         | 10.9         | 11.1         | 1 823.7         | 2 159.4         | 1 928.5         | 1 957.3         |
| \$200 000 to \$249 999 | 8.0                       | 8.5          | 8.4          | 9.2          | 1 789.0         | 1 808.2         | 1 936.6         | 2 053.5         |
| \$250 000 to \$299 999 | 4.8                       | 5.1          | 6.6          | 6.1          | 1 299.2         | 1 384.6         | 1 821.7         | 1 629.2         |
| \$300 000 and over     | 15.2                      | 16.8         | 19.2         | 23.6         | 10 193.9        | 11 779.9        | 13 312.6        | 16 920.2        |
| <b>Total</b>           | <b>106.1</b>              | <b>107.5</b> | <b>107.3</b> | <b>108.4</b> | <b>20 068.2</b> | <b>21 694.3</b> | <b>23 516.3</b> | <b>26 724.9</b> |

Source: *Agricultural Industries, Financial Statistics, Australia (7507.0)*.

## 15.10 AUSTRALIAN FARM BUSINESSES, Profit Margins



Source: *Agricultural Industries, Financial Statistics, Australia (7507.0)*.

## Gross indebtedness

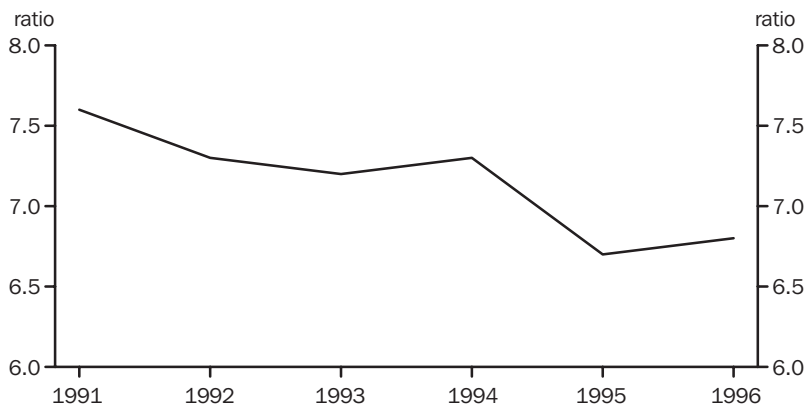
Australian farm businesses owed a total of \$19.6b at 30 June 1996 (table 15.11), a 7% increase on 1994-95. The aggregate debt has risen steadily from \$11.5b in 1986-87 when the current series of surveys began. The average gross indebtedness at end June 1996 was \$180,700 per farm business. About 25% of farm businesses owed more than \$200,000. On the other hand, 26% of farm businesses were debt free at the end of June 1996. The total interest bill for Australian farm businesses, \$1.7b, was 11% more than in 1994-95. The average interest payment per farm business was \$15,374 in 1995-96.

## 15.11 AUSTRALIAN FARM BUSINESSES, Aggregate and Average Gross Indebtedness

| 30 June | Gross indebtedness |                           |
|---------|--------------------|---------------------------|
|         | Aggregate          | Average per farm business |
|         | \$m                | \$                        |
| 1991    | 14 140.6           | 130 600                   |
| 1992    | 14 819.2           | 135 200                   |
| 1993    | 15 390.5           | 145 100                   |
| 1994    | 15 921.7           | 148 100                   |
| 1995    | 18 267.7           | 170 300                   |
| 1996    | 19 592.7           | 180 700                   |

Source: *Agricultural Industries, Financial Statistics, Australia (7507.0)*.

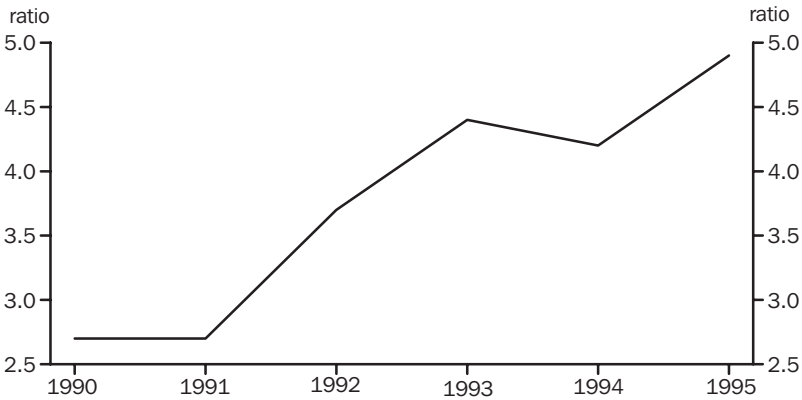
## 15.12 AUSTRALIAN FARM BUSINESSES, Debt to Asset Ratio(a) — 30 June



(a) The debt to asset ratio is the total value of assets at 30 June divided by gross indebtedness at 30 June.

Source: *Agricultural Industries, Financial Statistics, Australia (7507.0)*.

15.13 AUSTRALIAN FARM BUSINESSES, Ratio of Cash Operating Surplus to Interest Paid — 30 June



Source: *Agricultural Industries, Financial Statistics, Australia (7507.0)*.

Land used for agriculture

Scope of Agricultural Census

The major source of the statistics on land use, commodity production and livestock numbers in this chapter is the Agricultural Census conducted by the ABS at 31 March each year.

The ABS excludes from the Census those establishments which make only a small contribution to overall agricultural activity. The cutoff, in terms of the estimated value of agricultural operations (EVAO), has been adjusted over the years since 1982–83. From 1993–94 the cut-off was lowered from \$22,500 to \$5,000 to improve the overall coverage of all agricultural activity.

While this alteration has resulted in some changes in the counts of numbers of establishments engaged in agricultural activities, the effect on the statistics of production of major commodities is small. Statistics of minor commodities normally associated with small-scale operations may be affected to a greater extent. Care should be exercised when comparing data from 1993–94 onwards with those of previous years.

Land used for agriculture

In spite of Australia’s harsh environment, agriculture constitutes the most extensive form of land use. At 31 March 1997, the estimated total area of agricultural establishments in Australia was 471.1 million hectares, representing about 60% of the total land area (tables 15.14 and 15.15). The remainder of the Australian land area consists of unoccupied land (mainly desert in western and central Australia), Aboriginal land reserves principally located in the Northern Territory, forests, mining leases, national parks and urban areas.

Livestock grazing is the largest land user in Australian agriculture. This activity has led to the replacement of large areas of native vegetation with introduced pastures and grasses in the higher rainfall and irrigation areas.

At 31 March 1996, 4% of Australia’s agricultural land was under crops. This maintains the trend which has seen about 10% of Australia’s agricultural land cultivated each year since the 1980s. Until this time the area of land cropped or sown to pastures and grasses had been expanding rapidly. This expansion was facilitated by factors including increased use of fertilisers, improved water supply and reduction in the rabbit population due to myxomatosis.

## 15.14 AGRICULTURAL LAND UTILISATION IN AUSTRALIA

|          | Area of  |                              |            |                                                      | Total                                            |
|----------|----------|------------------------------|------------|------------------------------------------------------|--------------------------------------------------|
|          | Crops(a) | Sown pastures and<br>grasses | Balance(b) | Area of establishments<br>with agricultural activity | % of Australian land<br>area (768 284 000<br>ha) |
|          | mill. ha | mill. ha                     | mill. ha   | mill. ha                                             | %                                                |
| 31 March |          |                              |            |                                                      |                                                  |
| 1992     | 16.4     | 30.8                         | 418.8      | 466.0                                                | 60.7                                             |
| 1993     | 17.3     | 29.0                         | 413.8      | 460.1                                                | 59.9                                             |
| 1994     | 18.0     | 29.5                         | 421.6      | 469.1                                                | 61.1                                             |
| 1995     | 17.0     | n.a.                         | n.a.       | 463.3                                                | 60.3                                             |
| 1996     | 19.4     | n.a.                         | n.a.       | 465.2                                                | 60.6                                             |
| 1997p    | n.a.     | n.a.                         | n.a.       | 471.1                                                | 61.3                                             |

(a) Excludes pastures and grasses harvested for hay and seed which have been included in 'sown pastures and grasses'.

(b) Includes areas of arid or rugged land held under grazing licences but not always used for grazing, and also variable amounts of fallow land.

Source: AgStats (7117.0).

## 15.15 AREA OF ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY

|          | NSW      | Vic.     | Qld      | SA       | WA       | Tas.     | NT       | Aust. (incl.<br>ACT) |
|----------|----------|----------|----------|----------|----------|----------|----------|----------------------|
|          | mill. ha | mill. ha | mill. ha | mill. ha | mill. ha | mill. ha | mill. ha | mill. ha             |
| 31 March |          |          |          |          |          |          |          |                      |
| 1992     | 60.4     | 12.4     | 150.0    | 56.9     | 115.7    | 1.8      | 68.7     | 466.0                |
| 1993     | 59.4     | 12.3     | 149.5    | 56.6     | 110.6    | 1.8      | 69.9     | 460.1                |
| 1994     | 61.2     | 13.0     | 152.6    | 57.3     | 114.4    | 2.0      | 68.6     | 469.1                |
| 1995     | 60.3     | 12.7     | 149.7    | 56.1     | 114.0    | 1.9      | 68.6     | 463.3                |
| 1996     | 61.0     | 12.8     | 149.7    | 56.9     | 114.5    | 1.9      | 68.3     | 465.2                |
| 1997p    | 62.1     | 13.0     | 154.0    | 57.6     | 112.2    | 2.1      | 70.0     | 471.1                |

Source: AgStats (7117.0).

## Crops

Table 15.16 shows the area of crops in the States and Territories of Australia since 1870–71, and

table 15.17 is a summary of the area, production and gross value of the principal crops in Australia in recent years.

## 15.16 AREA OF CROPS(a)

|         | NSW     | Vic.    | Qld     | SA      | WA      | Tas.    | NT      | ACT     | Aust.   |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Year    | '000 ha | '000 ha | '000 ha | '000 ha | '000 ha | '000 ha | '000 ha | '000 ha | '000 ha |
| 1870–71 | 156     | 280     | 21      | 235     | 22      | 64      | —       | —       | 868     |
| 1880–81 | 245     | 627     | 46      | 846     | 26      | 57      | —       | —       | 1 846   |
| 1890–91 | 345     | 822     | 91      | 847     | 28      | 64      | —       | —       | 2 197   |
| 1900–01 | 990     | 1 260   | 185     | 959     | 81      | 91      | —       | —       | 3 567   |
| 1910–11 | 1 370   | 1 599   | 270     | 1 112   | 346     | 116     | —       | —       | 4 813   |
| 1920–21 | 1 807   | 1 817   | 316     | 1 308   | 730     | 120     | —       | 1       | 6 099   |
| 1930–31 | 2 756   | 2 718   | 463     | 2 196   | 1 939   | 108     | 1       | 2       | 10 184  |
| 1940–41 | 2 580   | 1 808   | 702     | 1 722   | 1 630   | 103     | —       | 2       | 8 546   |
| 1949–50 | 2 295   | 1 881   | 832     | 1 518   | 1 780   | 114     | —       | 4       | 8 424   |
| 1959–60 | 2 888   | 1 949   | 1 184   | 1 780   | 2 628   | 130     | 1       | 3       | 10 564  |
| 1969–70 | 4 999   | 2 212   | 2 208   | 2 290   | 3 912   | 98      | 6       | 2       | 15 728  |
| 1979–80 | 5 243   | 2 243   | 2 334   | 2 771   | 5 281   | 79      | 2       | 1       | 17 954  |
| 1990–91 | 4 073   | 2 063   | 2 872   | 2 933   | 5 359   | 75      | 6       | —       | 17 382  |
| 1991–92 | 3 846   | 2 039   | 2 302   | 2 920   | 5 216   | 76      | 5       | —       | 16 404  |
| 1992–93 | 3 906   | 2 258   | 2 316   | 3 073   | 5 668   | 73      | 4       | 1       | 17 297  |
| 1993–94 | 4 209   | 2 317   | 2 394   | 2 940   | 6 100   | 78      | 5       | —       | 18 043  |
| 1994–95 | 3 432   | 2 296   | 2 055   | 2 991   | 6 181   | 70      | 4       | —       | 17 030  |
| 1995–96 | 4 757   | 2 440   | 2 500   | 3 219   | 6 419   | 75      | 4       | —       | 19 409  |

(a) The classification of crops was revised in 1971–72, and adjustments made to statistics back to 1967–68. After 1966–67, lucerne for green feed, hay, seed and pasture cut for hay and harvested for seed or green feed are excluded. From 1970–71 to 1980–81 the figures related to area 'used for' crops, that is, an area used for more than one purpose during the year was counted only once. From 1981–82, an area double cropped has been counted separately each time used.

Source: AgStats (7117.0).

## 15.17 SELECTED CROPS, Area, Production and Gross Value

| Crop                                                            | 1993-94       |            |               | 1994-95       |            |               | 1995-96       |            |               |
|-----------------------------------------------------------------|---------------|------------|---------------|---------------|------------|---------------|---------------|------------|---------------|
|                                                                 | Area          | Production | Gross value   | Area          | Production | Gross value   | Area          | Production | Gross value   |
|                                                                 | '000 ha       | '000 t     | \$m           | '000 ha       | '000 t     | \$m           | '000 ha       | '000 t     | \$m           |
| Cereals for grain                                               |               |            |               |               |            |               |               |            |               |
| Barley                                                          | 3 424         | 6 668      | 845           | 2 470         | 2 913      | 622           | 3 111         | 5 823      | 1 276         |
| Grain sorghum                                                   | 499           | 1 084      | 173           | 687           | 1 273      | 242           | 770           | 1 592      | 320           |
| Maize                                                           | 44            | 204        | 41            | 50            | 242        | 59            | 56            | 311        | 69            |
| Oats                                                            | 947           | 1 647      | 148           | 897           | 924        | 166           | 1 136         | 1 875      | 289           |
| Rice                                                            | 125           | 1 042      | 262           | 119           | 1 016      | 216           | 137           | 966        | 226           |
| Wheat                                                           | 8 383         | 16 479     | 2 867         | 7 891         | 8 972      | 2 127         | 9 221         | 16 504     | 4 305         |
| Lupins for grain                                                | 1 150         | 1 480      | 270           | 1 407         | 1 076      | 199           | 1 323         | 1 559      | 279           |
| Crops for hay                                                   |               |            |               |               |            |               |               |            |               |
| Oats                                                            | 233           | 931        | 108           | 252           | 745        | 109           | 346           | 1 370      | 169           |
| Wheat                                                           | 17            | 65         | 6             | 36            | 64         | 12            | 22            | 62         | 8             |
| Sugar cane cut for crushing                                     | 338           | 31 312     | 945           | 363           | 32 971     | 1 208         | 377           | 35 889     | 1 233         |
| Tobacco                                                         | 3             | 8          | 51            | 3             | 7          | 40            | 3             | 8          | 45            |
| Cotton seed                                                     | 293           | 788        | 652           | 245           | 796        | 851           | 315           | 923        | 1 013         |
| Peanuts (in shell)                                              | 22            | 45         | 34            | 13            | 23         | 17            | 21            | 38         | 28            |
| Soybean                                                         | 41            | 81         | 36            | 18            | 27         | 11            | 24            | 45         | 18            |
| Canola                                                          | 177           | 305        | 108           | 356           | 264        | 97            | 377           | 557        | 208           |
| Sunflower                                                       | 113           | 105        | 40            | 136           | 112        | 46            | 82            | 68         | 25            |
| Orchard fruit                                                   |               |            |               |               |            |               |               |            |               |
| Oranges                                                         | n.a.          | 582        | 230           | n.a.          | 517        | 215           | n.a.          | 442        | 219           |
| Apples                                                          | n.a.          | 307        | 238           | n.a.          | 317        | 270           | n.a.          | 280        | 305           |
| Pears (excluding Nashi)                                         | n.a.          | 155        | 89            | n.a.          | 152        | 73            | n.a.          | 156        | 91            |
| Peaches                                                         | n.a.          | 59         | 53            | n.a.          | 58         | 50            | n.a.          | 60         | 50            |
| Other fruit                                                     |               |            |               |               |            |               |               |            |               |
| Bananas                                                         | 11            | 219        | 203           | 10            | 208        | 255           | 11            | 220        | 225           |
| Pineapples                                                      | 9             | 157        | 45            | 5             | 139        | 43            | 5             | 128        | 36            |
| Grapes                                                          | 67            | 920        | 450           | 73            | 769        | 511           | 81            | 1090       | 708           |
| Vegetables                                                      |               |            |               |               |            |               |               |            |               |
| Carrots                                                         | 5             | 195        | 91            | 7             | 239        | 133           | 8             | 250        | 136           |
| Potatoes                                                        | 40            | 1 185      | 338           | 38            | 1 122      | 378           | 42            | 1 308      | 420           |
| Tomatoes                                                        | 9             | 327        | 173           | 9             | 340        | 166           | 9             | 371        | 179           |
| <b>Total all crops<br/>(excluding pastures<br/>and grasses)</b> | <b>18 043</b> | <b>..</b>  | <b>10 947</b> | <b>17 030</b> | <b>..</b>  | <b>10 490</b> | <b>19 409</b> | <b>..</b>  | <b>14 737</b> |

Source: AgStats (7117.0), Value of Agricultural Commodities Produced, Australia (7503.0).

## Cereal grains

In Australia, cereals are conveniently divided into autumn-winter-spring growing (winter cereals) and spring-summer-autumn growing (summer cereals). Winter cereals such as wheat, oats, barley and rye are usually grown in rotation with some form of pasture such as subterranean clover, medics or lucerne. In recent years, alternative winter crops such as canola, field peas and lupins have been introduced to cereal rotation in areas where they had not previously been grown. Rice, maize and sorghum are summer cereals, with the latter being grown in association with winter cereals in some areas. In

northern Australia there are two rice growing seasons.

## Wheat

Wheat is Australia's largest crop. It is produced in all States but primarily on the mainland in a narrow crescent known as the wheat-belt. Inland of the Great Dividing Range, the wheat-belt stretches in a curve from central Queensland through New South Wales, Victoria and southern South Australia. In Western Australia, the wheat-belt continues around the south-west of the State and some way north, along the western side of the continent (see map 15.20).



The 1996–97 preliminary estimate of the volume of wheat production showed a 44% increase compared with that for the 1995–96 season (tables 15.18 and 15.19). New South Wales production was nearly twice that of 1995–96 and,

due to the breaking of the drought, almost ten times the amount of wheat produced in 1994–95. Production increased by 300% in Queensland during 1995–96, and by 25% in Victoria.

### 15.18 WHEAT, Area, Production and Receivals

| Year     | Area(a)   |                 | Production(a) |             | Australian Wheat Board receivals |
|----------|-----------|-----------------|---------------|-------------|----------------------------------|
|          | For grain | All purposes(b) | Grain         | Gross value |                                  |
|          | '000 ha   | '000 ha         | '000 t        | \$m         | '000 t                           |
| 1991–92  | 7 183     | 7 213           | 10 557        | 2 113.0     | 6 769                            |
| 1992–93  | 8 275     | (b)8 296        | 14 739        | 2 685.0     | 12 173                           |
| 1993–94  | 8 383     | (b)8 400        | 16 479        | 2 866.8     | 13 811                           |
| 1994–95  | 7 891     | (b)7 927        | 8 972         | 2 127.2     | 6 114                            |
| 1995–96  | 9 221     | 9 243           | 16 504        | 4 305.0     | 12 807                           |
| 1996–97p | 11 337    | n.a.            | 23 702        | 4 739.3     | 20 082                           |

(a) Area and production data relate to the year ending 31 March. (b) Excludes wheat for hay for all States except New South Wales.

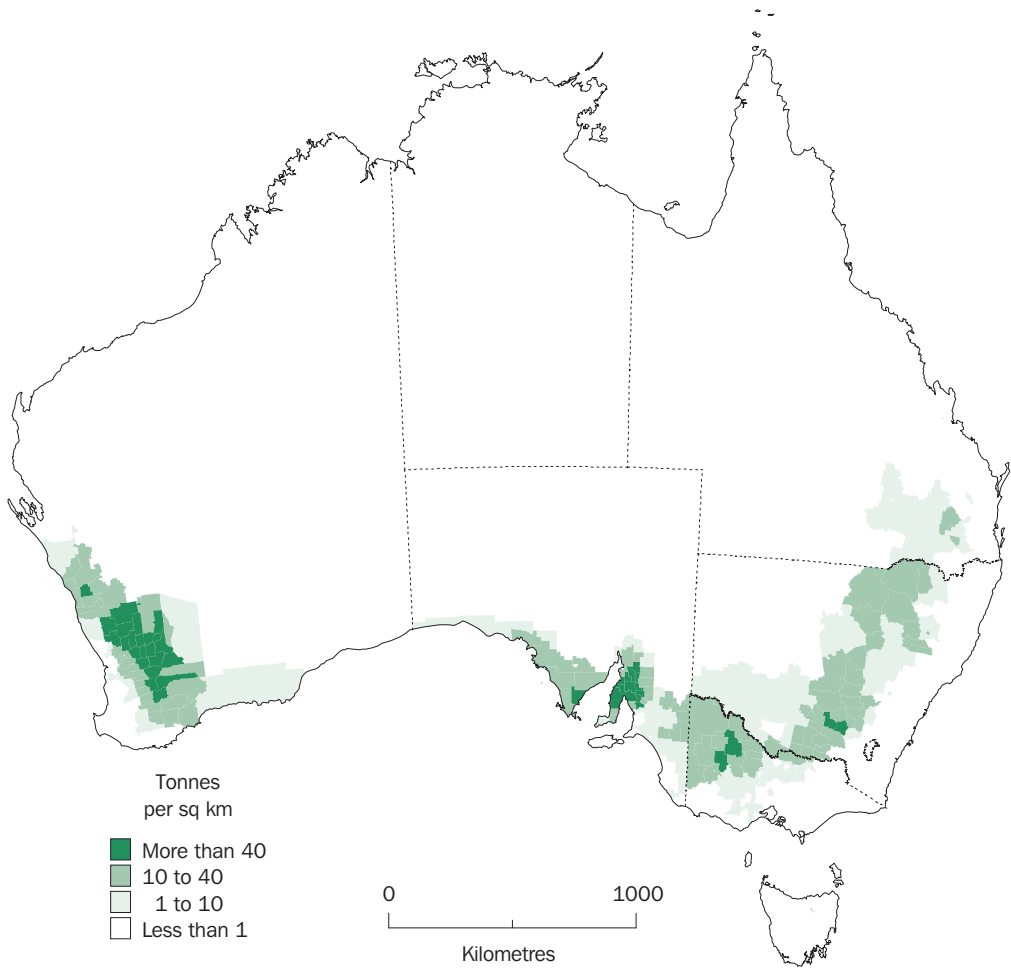
Source: Value of Agricultural Commodities Produced, Australia (7503.0); AgStats (7117.0); Principal Agricultural Commodities, Australia, Preliminary, 1995–96 (7111.0).

### 15.19 WHEAT FOR GRAIN, Area and Production

| Year                | NSW   | Vic.  | Qld   | SA    | WA    | Tas. | Aust.  |
|---------------------|-------|-------|-------|-------|-------|------|--------|
| AREA ('000 ha)      |       |       |       |       |       |      |        |
| 1991–92             | 1 499 | 664   | 492   | 1 297 | 3 230 | 1    | 7 183  |
| 1992–93             | 1 694 | 821   | 669   | 1 419 | 3 669 | 1    | 8 275  |
| 1993–94             | 1 978 | 780   | 556   | 1 216 | 3 852 | 2    | 8 383  |
| 1994–95             | 1 424 | 822   | 401   | 1 395 | 3 848 | 1    | 7 891  |
| 1995–96             | 2 328 | 853   | 627   | 1 519 | 3 892 | 1    | 9 221  |
| 1996–97p            | 3 316 | 1 021 | 1 056 | 1 561 | 4 381 | 2    | 11 337 |
| PRODUCTION ('000 t) |       |       |       |       |       |      |        |
| 1991–92             | 2 183 | 1 150 | 344   | 2 141 | 4 736 | 3    | 10 557 |
| 1992–93             | 3 583 | 2 022 | 735   | 2 421 | 5 979 | 5    | 14 739 |
| 1993–94             | 5 086 | 222   | 555   | 2 121 | 6 689 | 5    | 16 479 |
| 1994–95             | 875   | 944   | 225   | 1 487 | 5 438 | 3    | 8 972  |
| 1995–96             | 4 508 | 1 921 | 519   | 2 724 | 6 826 | 4    | 16 504 |
| 1996–97p            | 8 677 | 2 392 | 2 109 | 2 838 | 7 678 | 7    | 23 702 |

Source: AgStats (7117.0).

15.20 WHEAT FOR GRAIN, Production — 1995-96



Source: Agstats (7117.0).

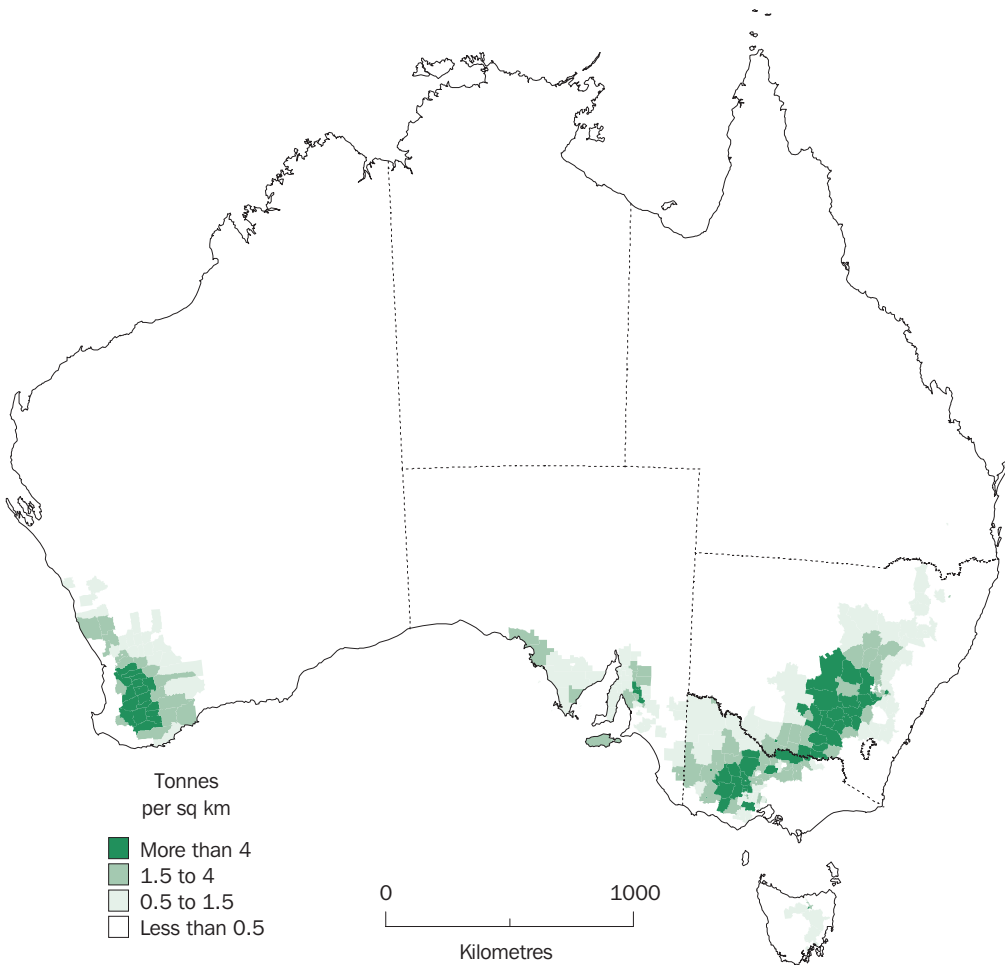
**Oats**

Oats are traditionally grown in moist, temperate regions. However, improved varieties and management practices have enabled oats to be grown over a wide range of soil and climatic conditions. They have a high feed value and produce a greater bulk of growth than other winter cereals; they need less cultivation and respond well to superphosphate and nitrogen. Oats have two main uses: as a grain crop, and as

a fodder crop (following sowing, or fallow or rough sowing into stubble or clover pastures). Fodder crops can either be grazed and then harvested for grain after removal of livestock, or else mown and baled or cut for chaff.

Map 15.21 shows the production of oats in Australia in 1995-96.

## 15.21 OATS FOR GRAIN, Production — 1995–96



Source: Agstats (7117.0).

Based on preliminary estimates, the 1996–97 production of oats for grain fell 9% when compared with the 1995–96 harvest (table 15.22). Victoria and New South Wales showed

falls of 20% and 14% respectively in 1996–97, but the levels of production for Australia are still well above those achieved in 1994–95 and on a par with production in recent pre-drought seasons.

15.22    OATS FOR GRAIN, Area and Production

| Year                | NSW | Vic. | Qld | SA  | WA  | Tas. | Aust. |
|---------------------|-----|------|-----|-----|-----|------|-------|
| AREA ('000 ha)      |     |      |     |     |     |      |       |
| 1991-92             | 457 | 183  | 15  | 129 | 367 | 9    | 1 160 |
| 1992-93             | 448 | 223  | 15  | 123 | 332 | 9    | 1 149 |
| 1993-94             | 369 | 186  | 16  | 101 | 268 | 7    | 947   |
| 1994-95             | 375 | 148  | 14  | 95  | 256 | 8    | 897   |
| 1995-96             | 505 | 187  | 14  | 120 | 300 | 10   | 1 136 |
| 1996-97p            | 396 | 180  | 46  | 125 | 333 | 9    | 1 088 |
| PRODUCTION ('000 t) |     |      |     |     |     |      |       |
| 1991-92             | 579 | 300  | 5   | 172 | 614 | 19   | 1 690 |
| 1992-93             | 761 | 404  | 10  | 165 | 578 | 19   | 1 937 |
| 1993-94             | 618 | 362  | 8   | 135 | 511 | 13   | 1 647 |
| 1994-95             | 197 | 201  | 3   | 87  | 425 | 11   | 924   |
| 1995-96r            | 711 | 391  | 7   | 162 | 585 | 18   | 1 875 |
| 1996-97p            | 610 | 313  | 30  | 162 | 568 | 15   | 1 697 |

Source: Agstats (7117.0); Principal Agricultural Commodities, Australia, Preliminary, 1995-96 (7111.0).

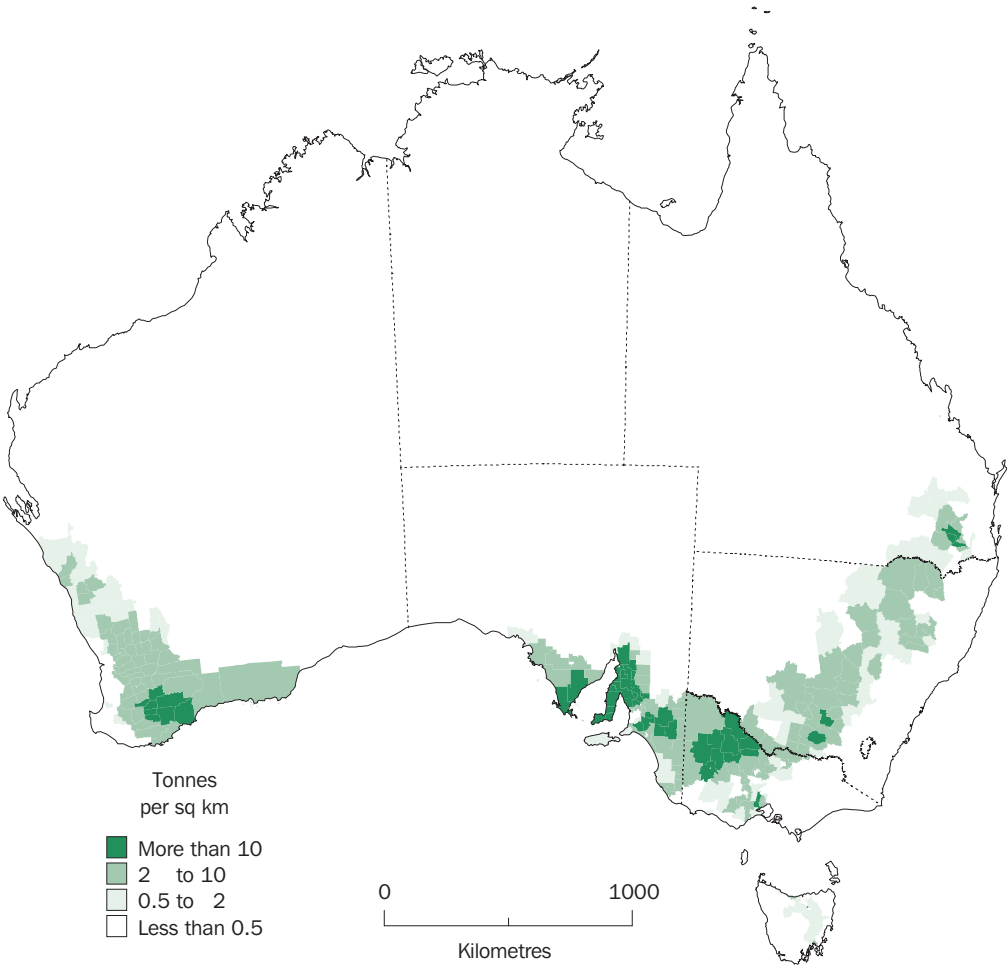
Barley

This cereal contains two main groups of varieties, 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes. Barley is grown principally as a grain crop, although in some areas it is used as a fodder crop for grazing, with grain being subsequently harvested if conditions are suitable. It is often grown as a rotation crop with wheat, oats and pasture. When sown for fodder, sowing may take place either early or late in the

season, as barley has a short growing period. It may therefore provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock or sold for malting. Map 15.23 shows the production of barley in Australia in 1995-96.

Preliminary estimates for barley in 1996-97 show that the production levels of the previous year held in most States (table 15.24), consolidating the increases since the 1994-95 season.

15.23 BARLEY FOR GRAIN, Production — 1995-96



Source: Agstats (7117.0).

**15.24 BARLEY FOR GRAIN, Area and Production**

| Year                | NSW   | Vic.  | Qld | SA    | WA    | Tas. | Aust. |
|---------------------|-------|-------|-----|-------|-------|------|-------|
| AREA ('000 ha)      |       |       |     |       |       |      |       |
| 1991-92             | 517   | 534   | 128 | 999   | 554   | 11   | 2 744 |
| 1992-93             | 560   | 551   | 189 | 1 023 | 611   | 12   | 2 947 |
| 1993-94             | 623   | 639   | 232 | 1 115 | 799   | 15   | 3 424 |
| 1994-95             | 410   | 492   | 93  | 882   | 579   | 14   | 2 470 |
| 1995-96             | 593   | 628   | 168 | 964   | 745   | 14   | 3 111 |
| 1996-97p            | 673   | 596   | 194 | 1 024 | 908   | 14   | 3 409 |
| PRODUCTION ('000 t) |       |       |     |       |       |      |       |
| 1991-92             | 749   | 898   | 70  | 1 882 | 900   | 32   | 4 530 |
| 1992-93             | 1 044 | 1 116 | 285 | 1 855 | 1 061 | 35   | 5 397 |
| 1993-94             | 1 357 | 1 386 | 261 | 2 242 | 1 381 | 41   | 6 668 |
| 1994-95             | 291   | 448   | 73  | 1 159 | 915   | 27   | 2 913 |
| 1995-96             | 1 074 | 1 342 | 195 | 1 851 | 1 323 | 38   | 5 823 |
| 1996-97p            | 1 509 | 1 217 | 453 | 1 966 | 1 629 | 35   | 6 808 |

Source: AgStats (7117.0); Principal Agricultural Commodities, Australia, Preliminary, 1995-96 (7111.0).

**Grain sorghum**

The sorghums are summer growing crops which are used in three ways: grain sorghum for grain; sweet or fodder sorghum, sudan grass and, more recently, columbus grass for silage, green feed and grazing; and broom millet for brooms and brushware.

Grain sorghum has been grown extensively only in the last two decades, with Queensland producing around 70% of the harvest (table 15.25). Rapid increases in production have resulted in a substantial increase in exports over this period. The grain is used primarily as stockfeed and is an important source for supplementing other coarse grains for this purpose.

**15.25 GRAIN SORGHUM FOR GRAIN, Area and Production**

| Year                | NSW  | Vic. | Qld   | SA  | WA   | Tas. | Aust.(a) |
|---------------------|------|------|-------|-----|------|------|----------|
| AREA ('000 ha)      |      |      |       |     |      |      |          |
| 1991-92             | 147  | —    | 420   | (b) | —    | (b)  | 569      |
| 1992-93             | 118  | —    | 308   | —   | —    | —    | 427      |
| 1993-94             | 99   | —    | 399   | (b) | —    | —    | 499      |
| 1994-95             | 161  | 6    | 519   | (b) | —    | (b)  | 687      |
| 1995-96             | 171  | 2    | 597   | (b) | —    | (b)  | 770      |
| 1996-97p            | 126  | —    | 435   | (b) | 2    | (b)  | 563      |
| PRODUCTION ('000 t) |      |      |       |     |      |      |          |
| 1991-92             | 398  | —    | 1 045 | (b) | —    | (b)  | 1 447    |
| 1992-93             | 229  | —    | 315   | —   | 2    | —    | 548      |
| 1993-94             | 228  | —    | 852   | (b) | —    | (b)  | 1 084    |
| 1994-95             | 347  | 8    | 916   | (b) | 2    | (b)  | 1 273    |
| 1995-96             | 472  | 4    | 1 116 | (b) | 0    | (b)  | 1 592    |
| 1996-97p            | n.a. | n.a. | n.a.  | (b) | n.a. | (b)  | n.a.     |

(a) Includes the Northern Territory. (b) Not collected.

Source: AgStats (7117.0).

## Maize

Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. Maize for grain is almost entirely confined to the south-east regions and the Atherton Tablelands of Queensland; and the north coast, northern slopes and tablelands and the Murrumbidgee Irrigation Area in New South Wales. Small amounts are grown in all States, except South Australia, for green feed and silage, particularly in association with the dairy industry.

In 1995–96, maize production rose 28% (table 15.26).

## Rice

Rice was first grown commercially in 1924–25 in the Murrumbidgee Irrigation Area, one of three irrigation areas in southern New South Wales where rice is now produced. Nearly all of Australia's rice is grown in New South Wales. The remainder is grown in the Burdekin River basin, and also at Mareeba in northern Queensland and in the Adelaide River District in the Northern Territory.

Preliminary estimates of the rice harvest in 1996–97 show a 40% increase in production over 1995–96 (table 15.27).

### 15.26 MAIZE FOR GRAIN, Area and Production

| Year                | NSW | Vic. | Qld | SA  | WA | Tas. | Aust. |
|---------------------|-----|------|-----|-----|----|------|-------|
| AREA ('000 ha)      |     |      |     |     |    |      |       |
| 1990–91             | 18  | —    | 29  | (a) | 1  | (a)  | 49    |
| 1991–92             | 17  | —    | 34  | (a) | 1  | (a)  | 52    |
| 1992–93             | 16  | —    | 27  | (a) | 2  | (a)  | 45    |
| 1993–94             | 14  | —    | 28  | (a) | 2  | (a)  | 44    |
| 1994–95             | 21  | 1    | 27  | (a) | 2  | (a)  | 50    |
| 1995–96             | 24  | 1    | 31  | (a) | —  | (a)  | 56    |
| PRODUCTION ('000 t) |     |      |     |     |    |      |       |
| 1990–91             | 91  | 2    | 95  | (a) | 5  | (a)  | 194   |
| 1991–92             | 119 | 3    | 141 | (a) | 5  | (a)  | 269   |
| 1992–93             | 108 | 3    | 75  | (a) | 13 | (a)  | 199   |
| 1993–94             | 100 | 2    | 87  | (a) | 15 | (a)  | 204   |
| 1994–95             | 145 | 5    | 80  | (a) | 11 | (a)  | 242   |
| 1995–96             | 190 | 7    | 114 | (a) | —  | (a)  | 311   |

(a) Not collected.

Source: AgStats (7117.0).

### 15.27 RICE FOR GRAIN, Area and Production

| Year                | NSW   | Vic. | Qld | SA  | WA  | Tas. | Aust. |
|---------------------|-------|------|-----|-----|-----|------|-------|
| AREA ('000 ha)      |       |      |     |     |     |      |       |
| 1991–92             | 109   | (a)  | 4   | (a) | (a) | (a)  | 114   |
| 1992–93             | 105   | (a)  | 2   | (a) | (a) | (a)  | 106   |
| 1993–94             | 125   | (a)  | (a) | (a) | (a) | (a)  | 125   |
| 1994–95             | 119   | (a)  | (a) | (a) | (a) | (a)  | 119   |
| 1995–96             | 136   | (a)  | (a) | (a) | (a) | (a)  | 137   |
| 1996–97p            | 163   | 1    | (a) | (a) | (a) | (a)  | 164   |
| PRODUCTION ('000 t) |       |      |     |     |     |      |       |
| 1991–92             | 929   | (a)  | 28  | (a) | (a) | (a)  | 957   |
| 1992–93             | 846   | (a)  | 12  | (a) | (a) | (a)  | 858   |
| 1993–94             | 1 042 | (a)  | (a) | (a) | (a) | (a)  | 1 042 |
| 1994–95             | 1 016 | (a)  | (a) | (a) | (a) | (a)  | 1 016 |
| 1995–96             | 965   | (a)  | (a) | (a) | (a) | (a)  | 966   |
| 1996–97p            | 1344  | 8    | (a) | (a) | (a) | (a)  | 1 352 |

(a) Not collected.

Source: AgStats (7117.0).

**15.28 SELECTED VEGETABLES FOR HUMAN CONSUMPTION, Area**

|         | French<br>and<br>runner<br>beans | Cabbages | Carrots | Cauliflowers | Onions  | Green<br>peas | Potatoes | Tomatoes | Other   | Total<br>vegetables |
|---------|----------------------------------|----------|---------|--------------|---------|---------------|----------|----------|---------|---------------------|
| Year    | '000 ha                          | '000 ha  | '000 ha | '000 ha      | '000 ha | '000 ha       | '000 ha  | '000 ha  | '000 ha | '000 ha             |
| 1990–91 | 6.4                              | 2.3      | 4.3     | 3.8          | 5.7     | 10.8          | 39.8     | 10.1     | 37.5    | <b>120.7</b>        |
| 1991–92 | 6.8                              | 2.3      | 4.7     | 3.6          | 5.4     | 8.9           | 39.8     | 9.0      | 35.4    | <b>117.5</b>        |
| 1992–93 | 6.7                              | 2.1      | 4.9     | 4.0          | 4.4     | 9.2           | 38.8     | 8.6      | 39.0    | <b>117.7</b>        |
| 1993–94 | 6.5                              | 2.0      | 5.4     | 3.7          | 5.2     | 10.5          | 40.3     | 8.9      | 42.8    | <b>125.3</b>        |
| 1994–95 | 6.1                              | 2.1      | 6.9     | 3.7          | 5.2     | 9.8           | 37.6     | 8.7      | 55.7    | <b>119.3</b>        |
| 1995–96 | 7.1                              | 2.2      | 7.6     | 4.0          | 5.9     | 8.2           | 41.8     | 8.6      | 62.9    | <b>131.4</b>        |

(a) Excludes potatoes for seed.

Source: AgStats (7117.0).

**15.29 SELECTED VEGETABLES FOR HUMAN CONSUMPTION, Production**

|         | French and<br>runner beans | Cabbages | Carrots | Cauliflowers | Onions | Green peas<br>(pod weight) | Potatoes | Tomatoes |
|---------|----------------------------|----------|---------|--------------|--------|----------------------------|----------|----------|
| Year    | '000 t                     | '000 t   | '000 t  | '000 t       | '000 t | '000 t                     | '000 t   | '000 t   |
| 1990–91 | 29.9                       | 76.8     | 152.1   | 90.3         | 222.3  | 91.5                       | 1 136.2  | 364.1    |
| 1991–92 | 32.5                       | 78.6     | 158.3   | 78.3         | 220.5  | 83.5                       | 1 150.1  | 330.5    |
| 1992–93 | 32.0                       | 69.5     | 169.5   | 80.2         | 167.9  | 79.6                       | 1 129.2  | 290.8    |
| 1993–94 | 31.0                       | 64.5     | 194.8   | 75.2         | 213.2  | 97.2                       | 1 184.7  | 327.2    |
| 1994–95 | 29.4                       | 70.8     | 238.5   | 66.1         | 200.4  | 97.9                       | 1 122.0  | 340.1    |
| 1995–96 | 32.0                       | 69.4     | 250.0   | 71.1         | 244.5  | 80.8                       | 1 308.1  | 371.0    |

Source: AgStats (7117.0).

**Vegetables**

The area sown to vegetables reached a peak of over 200,000 hectares in 1945. It remained static at around 109,000 hectares from the mid-1970s to the mid-1980s, then increased until the end of the decade and increased again in 1995–96 (table 15.28). Yields from most vegetable crops have continued to increase due to variety breeding for increased yields, greater use of irrigation and better control of disease and insect pests.

In 1995–96 potatoes were the largest vegetable crop in terms of both area and weight (tables 15.28 and 15.29).

**Fruit (excluding grapes)**

A wide variety of fruit is grown in Australia, ranging from pineapples, mangoes and pawpaws

in the tropics to pome, stone and berry fruits in temperate regions. Table 15.30 shows the number of trees for the main types of orchard fruit, and the area under cultivation for bananas and pineapples.

The largest fruit crops in Australia are apples, oranges and bananas.

However, some other fruit types have experienced considerable growth in recent years. These include kiwi fruit and strawberries. The most significant crops in terms of gross value of production are apples and bananas. In 1995–96 the value of the banana crop fell 12% while the value of the apple crop rose 13% (table 15.31).



**15.30 SELECTED FRUIT, Number of Trees — Area**

| Year     | Orchard fruit |            |            |            | Area of selected tropical fruits |            | Total area of fruit (excluding grapes) |
|----------|---------------|------------|------------|------------|----------------------------------|------------|----------------------------------------|
|          | Apples        | Oranges    | Pears      | Peaches    | Bananas                          | Pineapples |                                        |
|          | '000 trees    | '000 trees | '000 trees | '000 trees | ha                               | ha         | ha                                     |
| 1991–92  | 7 206         | 7 536      | 1 645      | 2 123      | 9 913                            | 5 745      | 116 702                                |
| 1992–93  | 7 321         | 7 797      | 1 531      | 2 214      | 10 520                           | 5 854      | 123 066                                |
| 1993–94  | 7 777         | 8 062      | 1 610      | 2 502      | 10 687                           | 5 870      | 132 419                                |
| 1994–95  | 7 989         | 7 684      | 1 508      | 2 396      | 9 807                            | 5 225      | 128 258                                |
| 1995–96  | 8 543         | 7 701      | 1 543      | 2 571      | 10 815                           | 4 697      | 133 461                                |
| 1996–97p | 9 404         | 7 996      | (a)1 997   | 2 850      | 12 668                           | 4 675      | n.a.                                   |

(a) Includes Nashi.

Source: AgStats (7117.0).

**15.31 SELECTED FRUIT, Production and Value of Production**

| Year                            | Apples | Apricots | Bananas | Cherries | Oranges | Peaches | Pears(a) | Pineapples | Plums and prunes |
|---------------------------------|--------|----------|---------|----------|---------|---------|----------|------------|------------------|
| PRODUCTION ('000 t)             |        |          |         |          |         |         |          |            |                  |
| 1990–91                         | 288.7  | 25.2     | 165.1   | 5.4      | 453.3   | 57.9    | 156.7    | 126.0      | 19.6             |
| 1991–92                         | 316.1  | 31.8     | 176.9   | 4.8      | 469.9   | 61.7    | 175.7    | 133.3      | 21.6             |
| 1992–93                         | 327.8  | 29.5     | 213.9   | 5.0      | 616.5   | 62.6    | 161.4    | 142.4      | 25.0             |
| 1993–94                         | 306.9  | 21.2     | 219.2   | 6.4      | 582.1   | 59.4    | 155.2    | 157.4      | 26.1             |
| 1994–95                         | 316.6  | 29.8     | 208.1   | 5.8      | 517.2   | 58.7    | 151.7    | 138.5      | 21.3             |
| 1995–96                         | 280.0  | 21.6     | 220.0   | 4.8      | 442.1   | 60.4    | 156.0    | 127.9      | 21.4             |
| 1996–97p                        | n.a.   | 27.0     | 214.3   | n.a.     | 528.0   | 70.0    | n.a.     | 124.9      | 26.0             |
| GROSS VALUE OF PRODUCTION (\$m) |        |          |         |          |         |         |          |            |                  |
| 1990–91                         | 182.6  | 23.6     | 235.2   | 19.7     | 164.6   | 44.0    | 83.6     | 37.3       | 26.3             |
| 1991–92                         | 269.4  | 33.5     | 270.0   | 20.2     | 202.8   | 49.0    | 127.1    | 39.0       | 29.9             |
| 1992–93                         | 263.4  | 30.6     | 299.8   | 19.2     | 212.1   | 49.7    | 103.0    | 41.8       | 37.5             |
| 1993–94                         | 237.6  | 27.1     | 203.3   | 27.0     | 230.0   | 53.2    | 89.0     | 45.2       | 37.2             |
| 1994–95                         | 269.8  | 28.8     | 254.7   | 27.2     | 214.8   | 50.0    | 73.4     | 43.3       | 31.9             |
| 1995–96                         | 305.4  | 30.8     | 225.2   | 22.7     | 219.4   | 49.8    | 90.7     | 36.0       | 33.2             |

(a) Includes Nashi.

Source: AgStats (7117.0); Value of Agricultural Commodities Produced, Australia (7503.0).

**Grapes**

Grapes are a temperate crop which require warm to hot summer conditions for ripening and predominantly winter rainfall. Freedom from late spring frosts is essential. They are grown for wine-making, drying and, to a lesser extent, for table use (see tables 15.32 and 15.33). Some of the better known wine producing areas are the Barossa, Clare, Riverland, Southern

Districts and Coonawarra (South Australia); north-eastern Victoria and Great Western (Victoria); Hunter and Riverina (New South Wales); Sunraysia (New South Wales and Victoria); and Swan Valley and Margaret River (Western Australia).

The gross value of grape production for 1995–96 increased by 39% to \$708.4m (table 15.32).

## 15.32 VITICULTURE, Area, Production and Value

| Year    | Area    |         | Production of grapes used for(a) |                     | Total production(b) |             |
|---------|---------|---------|----------------------------------|---------------------|---------------------|-------------|
|         | Bearing | Total   | Winemaking                       | Drying              | Quantity            | Gross value |
|         | '000 ha | '000 ha | '000 t fresh weight              | '000 t fresh weight | '000 t fresh weight | \$m         |
| 1990-91 | 54      | 60      | 487                              | 317                 | 851                 | 362.0       |
| 1991-92 | 56      | 61      | 565                              | 373                 | 987                 | 433.0       |
| 1992-93 | 58      | 63      | 545                              | 197                 | 793                 | 377.6       |
| 1993-94 | 61      | 67      | 662                              | 213                 | 920                 | 450.1       |
| 1994-95 | 62      | 73      | 577                              | 147                 | 769                 | 511.0       |
| 1995-96 | 65      | 81      | 784                              | 248                 | 1 087               | 708.4       |

(a) Excludes the Northern Territory and the Australian Capital Territory. (b) Includes grapes used for table and other purposes.

Source: Value of Agricultural Commodities Produced, Australia (7503.0).

## 15.33 VITICULTURE, Area and Production by Grape Variety — 1996 season

| Variety                    | Area of vines at harvest |                 |               | Production of grapes used for(a) |                     |                     |                     |
|----------------------------|--------------------------|-----------------|---------------|----------------------------------|---------------------|---------------------|---------------------|
|                            | Bearing                  | Not yet bearing | All vines     | Winemaking(a)                    | Drying              | Table               | Total               |
|                            | ha                       | ha              | ha            | tonnes fresh weight              | tonnes fresh weight | tonnes fresh weight | tonnes fresh weight |
| <b>Red grapes</b>          |                          |                 |               |                                  |                     |                     |                     |
| Cabernet Sauvignon         | 6 547                    | 2 611           | 9 158         | 70 593                           | 18                  | 12                  | 70 623              |
| Currant (including Carina) | 1 161                    | 97              | 1 258         | 3 707                            | 16 267              | 47                  | 20 021              |
| Grenache                   | 1 931                    | 106             | 2 037         | 27 095                           | 0                   | 361                 | 27 456              |
| Mataro                     | 576                      | 36              | 613           | 9 287                            | 0                   | 55                  | 9 342               |
| Pinot Noir                 | 1 455                    | 349             | 1 804         | 15 233                           | 0                   | 0                   | 15 233              |
| Shiraz                     | 7 154                    | 3 713           | 10 867        | 84 739                           | 0                   | 2                   | 84 741              |
| Other red grapes           | 4 988                    | 1 032           | 6 018         | 43 546                           | 478                 | 17 977              | 62 001              |
| Total red grapes           | 23 812                   | 7 944           | 31 756        | 254 200                          | 16 764              | 18 454              | 289 417             |
| <b>White grapes</b>        |                          |                 |               |                                  |                     |                     |                     |
| Chardonnay                 | 7 904                    | 4 440           | 12 345        | 94 677                           | 0                   | 70                  | 94 747              |
| Doradillo                  | 525                      | 7               | 532           | 14 166                           | 0                   | 72                  | 14 238              |
| Muscat Gordo Blanco        | 3 243                    | 270             | 3 513         | 68 893                           | 4 899               | 89                  | 73 882              |
| Palomino and Pedro Ximenes | 581                      | 9               | 589           | 9 912                            | 18                  | 7                   | 9 937               |
| Rhine Riesling             | 3 366                    | 132             | 3 498         | 37 682                           | 0                   | 0                   | 37 682              |
| Semillon                   | 3 135                    | 1 161           | 4 295         | 46 154                           | 0                   | 0                   | 46 164              |
| Sultana                    | 14 590                   | 559             | 15 149        | 147 808                          | 221 532             | 25 189              | 394 530             |
| Waltham Cross              | 621                      | 21              | 642           | 3 133                            | 4 651               | 1 826               | 9 611               |
| Other white grapes         | 7 081                    | 1 173           | 8 256         | 105 931                          | 605                 | 10 078              | 116 613             |
| Total white grapes         | 41 046                   | 7 772           | 48 818        | 528 366                          | 231 706             | 37 332              | 797 404             |
| <b>Total grapes</b>        | <b>64 858</b>            | <b>15 717</b>   | <b>80 574</b> | <b>782 566</b>                   | <b>248 470</b>      | <b>55 786</b>       | <b>1 086 821</b>    |

(a) Excludes Northern Territory and the Australian Capital Territory where varietal data are not collected.

Source: AgStats (7117.0).

## Selected other crops

### Oilseeds

The oilseeds industry is a relatively young industry by Australian agricultural standards. The specialist oilseed crops grown in Australia are sunflower, soybeans, canola, safflower and linseed. Sunflower and soybeans are summer grown while the others are winter crops. In Australia, oilseeds are crushed for their oil, which is used for edible and industrial purposes, and protein meals for livestock feeds.

While oilseed crops are grown in all States, the largest producing regions have been the grain growing areas of the eastern States. The last 10 years have seen sunflower production fall 77% to 68,000 tonnes. This has been more than offset by the rapid rise in popularity of canola, with production in 1995–96 of 557,000 tonnes compared to only 32,000 in 1984–85. Australian

production of oilseeds reached 697,000 tonnes in 1995–96, an increase of 280,000 tonnes over 1994–95 production. The biggest contribution to the increase (192,000 tonnes) came from New South Wales.

### Cotton

Cotton is grown primarily for its fibre (lint). When the cotton is matured, seed cotton is taken to a gin where it is separated (ginned) into lint and seed. Lint is used for yarn while seed is further processed at an oil mill. There the short fibres (linters) remaining on the seed after ginning are removed. They are too short to make into cloth but are used for wadding, upholstery and paper. The seeds are then separated into kernels and hulls. Hulls are used for stock feed and as fertiliser, while kernels are crushed to extract oil. The oilcake residue (crushed kernels) is ground into meal which is a protein roughage also used as stock feed.

#### 15.34 OILSEEDS, Area and Production

| Year                | NSW | Vic. | Qld | SA | WA  | Tas. | Aust. |
|---------------------|-----|------|-----|----|-----|------|-------|
| AREA ('000 ha)      |     |      |     |    |     |      |       |
| 1990–91             | 134 | 23   | 135 | 7  | 2   | —    | 302   |
| 1991–92             | 155 | 47   | 71  | 15 | 17  | —    | 305   |
| 1992–93             | 119 | 37   | 50  | 14 | 12  | —    | 232   |
| 1993–94             | 177 | 66   | 88  | 24 | 37  | —    | 392   |
| 1994–95(a)          | 217 | 95   | 92  | 33 | 104 | —    | 540   |
| 1995–96(a)          | 227 | 105  | 57  | 35 | 99  | —    | 522   |
| PRODUCTION ('000 t) |     |      |     |    |     |      |       |
| 1990–91             | 169 | 21   | 124 | 9  | 2   | —    | 325   |
| 1991–92             | 191 | 44   | 78  | 19 | 16  | —    | 348   |
| 1992–93             | 198 | 41   | 36  | 16 | 12  | —    | 304   |
| 1993–94             | 301 | 83   | 82  | 32 | 48  | —    | 545   |
| 1994–95(a)          | 147 | 69   | 64  | 30 | 108 | —    | 417   |
| 1995–96(a)          | 339 | 143  | 46  | 51 | 117 | —    | 697   |

(a) Excludes linseed.

Source: AgStats (7117.0).

#### 15.35 COTTON, Area, Production and Exports

| Year    | Seed cotton(a) |          |             | Cottonseed(b) | Lint(b) | Raw cotton exports |              |
|---------|----------------|----------|-------------|---------------|---------|--------------------|--------------|
|         | Area           | Quantity | Gross value |               |         | Quantity           | Value f.o.b. |
|         | '000 ha        | '000 t   | \$m         | '000 t        | '000 t  | '000 t             | \$m          |
| 1990–91 | 279            | 1 129    | 898         | 686           | 433     | 319                | 689          |
| 1991–92 | 312            | 1 278    | 879         | 724           | 502     | 463                | 945          |
| 1992–93 | 287            | 1 000    | 706         | 528           | 373     | 396                | 755          |
| 1993–94 | 293            | 788      | 652         | 466           | 329     | 361                | 732          |
| 1994–95 | 245            | 796      | 851         | 474           | 335     | 296                | 678          |
| 1995–96 | 315            | 923      | 1 014       | 594           | 429     | 311                | 762          |

(a) Before ginning. (b) Estimated by the Australian Bureau of Agricultural and Resource Economics (ABARE), and the ABS Foreign Trade Section.

Source: ABARE, *Australian Commodity Statistics, 1995*; *Value of Agricultural Commodities Produced, Australia (7503.0)*; AgStats (7117.0).

The quantity and value of seed cotton production rose significantly in 1995–96 after two low years (table 15.35). However, yield declined, from 3.2 tonnes per hectare in 1994–95 to 2.9 tonnes per hectare in 1995–96.

## Sugar

Sugar cane is grown commercially in Australia along the east coast over a distance of some 2,100 km, in a number of discontinuous areas from Maclean in northern New South Wales to Mossman in Queensland. The geographical spread contributes to the overall reliability of the sugar cane crop and to Australia's record as a reliable sugar supplier.

About 95% of production occurs in Queensland (table 15.36), with some 75% of the crop grown

north of the Tropic of Capricorn in areas where rainfall is reliable and the warm, moist and sunny conditions are ideal for growing sugar cane. Farm sizes generally range between 20 and 70 hectares.

## Fodder crops

Considerable areas of Australia are devoted to fodder crops, which are either used for grazing (as green feed) or harvested and conserved as hay and silage, etc (table 15.37).

The development of fodder conservation as a means of supplementing pasture and natural sources of stockfeed is the result of the seasonal and comparatively unreliable nature of rainfall in Australian agricultural areas.

**15.36 SUGAR CANE, Area, Production and Yield**

| Year     | New South Wales             |            |           |           |           |                             | Queensland |           |           |           |
|----------|-----------------------------|------------|-----------|-----------|-----------|-----------------------------|------------|-----------|-----------|-----------|
|          | Sugar cane cut for crushing |            |           | Raw sugar |           | Sugar cane cut for crushing |            |           | Raw sugar |           |
|          | Area harvested              | Production | Yield     | Quantity  | Yield     | Area harvested              | Production | Yield     | Quantity  | Yield     |
|          | '000 ha                     | '000t      | '000 t/ha | tonnes    | '000 t/ha | '000 ha                     | '000t      | '000 t/ha | tonnes    | '000 t/ha |
| 1991–92  | 15                          | 1 416      | 93.7      | 180       | 12.0      | 314                         | 19 225     | 61.2      | 2 931     | 9.3       |
| 1992–93  | 16                          | 1 667      | 107.3     | 240       | 15.0      | 312                         | 26 292     | 84.2      | 4 016     | 12.9      |
| 1993–94  | 15                          | 1 674      | 112.7     | 218       | 14.5      | 323                         | 29 638     | 91.8      | 4 082     | 12.6      |
| 1994–95  | 16                          | 1 825      | 111.2     | 242       | 15.1      | 347                         | 31 146     | 89.8      | 4 821     | 13.8      |
| 1995–96  | 18                          | 1 923      | 107.8     | 284       | 14.9      | 359                         | 33 898     | 94.6      | 4 677     | 12.8      |
| 1996–97p | 19                          | 2 344      | 123.4     | n.a.      | n.a.      | 381                         | 36 556     | 95.9      | n.a.      | n.a.      |

Source: AgStats (7117.0); ABARE: Australian Commodities Forecasts and Issues, 1997.

**15.37 FODDER CROPS, Area and Production**

| Year    | Hay(a)  |            |             | Green feed or silage(b) |             |
|---------|---------|------------|-------------|-------------------------|-------------|
|         | Area    | Production |             | Area                    | Silage made |
|         |         | Quantity   | Gross value |                         |             |
|         | '000 ha | '000 t     | \$m         | '000 ha                 | '000 t      |
| 1990–91 | (c)336  | (c)1 068   | (c)112.3    | (d)787                  | (d)574      |
| 1991–92 | (c)450  | (c)1 480   | (c)159.0    | (d)759                  | (d)687      |
| 1992–93 | (c)324  | (c)1 220   | (c)119.2    | (d)712                  | (d)883      |
| 1993–94 | 321     | 1 227      | 136.3       | 707                     | 1 142       |
| 1994–95 | 385     | 1 074      | 158.1       | n.a.                    | n.a.        |
| 1995–96 | 368     | 1 432      | 237.1       | 1 000                   | n.a.        |

(a) Principally oaten and wheaten hay. (b) Principally from oats, barley, wheat and forage sorghum. (c) Excludes wheat for hay for all States except New South Wales. (d) Excludes oats for New South Wales, Victoria, Tasmania and the Northern Territory.

Source: AgStats (7117.0).

## Livestock

The numbers of each of the principal categories of livestock in Australia are shown in table 15.38 at 10-yearly intervals from 1861 to 1991, and then yearly.

**15.38 LIVESTOCK**

|           | Cattle    | Sheep and<br>lambs | Pigs  |
|-----------|-----------|--------------------|-------|
|           | '000      | '000               | '000  |
| 31. March |           |                    |       |
| 1861      | 3 958     | 20 135             | 351   |
| 1871      | 4 276     | 41 594             | 543   |
| 1881      | 7 527     | 62 184             | 816   |
| 1891      | 10 300    | 97 881             | 891   |
| 1901      | 8 640     | 70 603             | 950   |
| 1911      | 11 745    | 98 066             | 1 026 |
| 1921      | 13 500    | 81 796             | 674   |
| 1931      | 11 721    | 110 568            | 1 072 |
| 1941      | 13 256    | 122 694            | 1 797 |
| 1951      | 15 229    | 115 596            | 1 134 |
| 1961      | 17 332    | 152 579            | 1 615 |
| 1971      | 24 373    | 177 792            | 2 590 |
| 1981      | 25 168    | 134 407            | 2 430 |
| 1991      | (a)23 662 | 163 238            | 2 531 |
| 1992      | (a)23 880 | 148 203            | 2 570 |
| 1993      | (a)24 059 | 138 099            | 2 646 |
| 1994      | (a)25 758 | 132 569            | 2 775 |
| 1995r     | (a)25 731 | 120 862            | 2 653 |
| 1996      | (a)26 377 | 121 116            | 2 526 |
| 1997p     | (a)26 354 | 123 333            | 2 684 |

(a) Excluding house cows and heifers.

Source: *Livestock and Livestock Products, Australia* (7215.0), *Principal Agricultural Commodities, Australia, Preliminary, 1995–96* (7111.0).

## Cattle

Cattle raising is carried out in all States, the main object in most districts being the production of stock suitable for slaughtering and in others the raising of dairy herds. In some areas, cattle are raised for both dairy and beef purposes. While dairy cattle are restricted mainly to southern and coastal districts, beef cattle are more concentrated in Queensland and New South Wales. Table 15.39 shows the number of cattle by age, sex and purpose.

Cattle numbers in Australia increased slowly during the 1960s and 1970s, despite seasonal changes and heavy slaughtering, to a peak of 33.4 million in 1976. Beef cattle production is often combined with cropping, dairying and sheep. In the northern half of Australia, cattle properties and herd sizes are very large, pastures are generally unimproved, fodder crops are rare and beef is usually the only product. The industry is more intensive in the south because of the more favourable environment including more improved pasture (see map 15.41).

Drought conditions in the early 1980s led to a decline in the beef herd until 1984. For the next five years, the size of the herd remained relatively static. Since 1989, cattle numbers have gradually increased, despite drought conditions which have prevailed in many parts of Queensland and north-western New South Wales. Table 15.40 shows the number of cattle by State/Territory.

**15.39 CATTLE, By Age, Sex and Purpose**

|                                    | 31 March      |               |               |               |               |               |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                    | 1992          | 1993          | 1994          | 1995r         | 1996r         | 1997p         |
|                                    | '000          | '000          | '000          | '000          | '000          | '000          |
| <b>Milk cattle</b>                 |               |               |               |               |               |               |
| Bulls used or intended for service | 31            | 31            | 36            | (a)           | (a)           | (a)           |
| Cows (in milk and dry)(b)          | 2 401         | 2 472         | 2 642         | 1 821         | 1 884         | 2 046         |
| House cows and heifers             | (a)           | (a)           | (a)           | (a)           | (a)           | (a)           |
| Total                              | 2 432         | 2 504         | 2 678         | 2 740         | 2 808         | 3 067         |
| <b>Meat cattle</b>                 |               |               |               |               |               |               |
| Bulls used or intended for service | 521           | 526           | 557           | 555           | 553           | 522           |
| Cows and heifers (1 year and over) | 10 748        | 11 171        | 12 076        | 11 213        | 11 667        | 11 581        |
| Calves under 1 year                | 5 128         | 5 064         | 5 388         | 5 806         | 5 768         | 6 065         |
| Other cattle (1 year and over)     | 5 050         | 4 795         | 5 058         | 5 418         | 5 581         | 5 118         |
| Total                              | 21 447        | 21 555        | 23 080        | 22 991        | 23 569        | 23 287        |
| <b>Total all cattle</b>            | <b>23 880</b> | <b>24 062</b> | <b>25 758</b> | <b>25 731</b> | <b>26 377</b> | <b>26 354</b> |

(a) Not collected. (b) Prior to 1995 included heifer and heifer calves.

Source: *Livestock and Livestock Products, Australia* (7215.0); *Principal Agricultural Commodities, Australia, Preliminary, 1995–96* (7111.0).

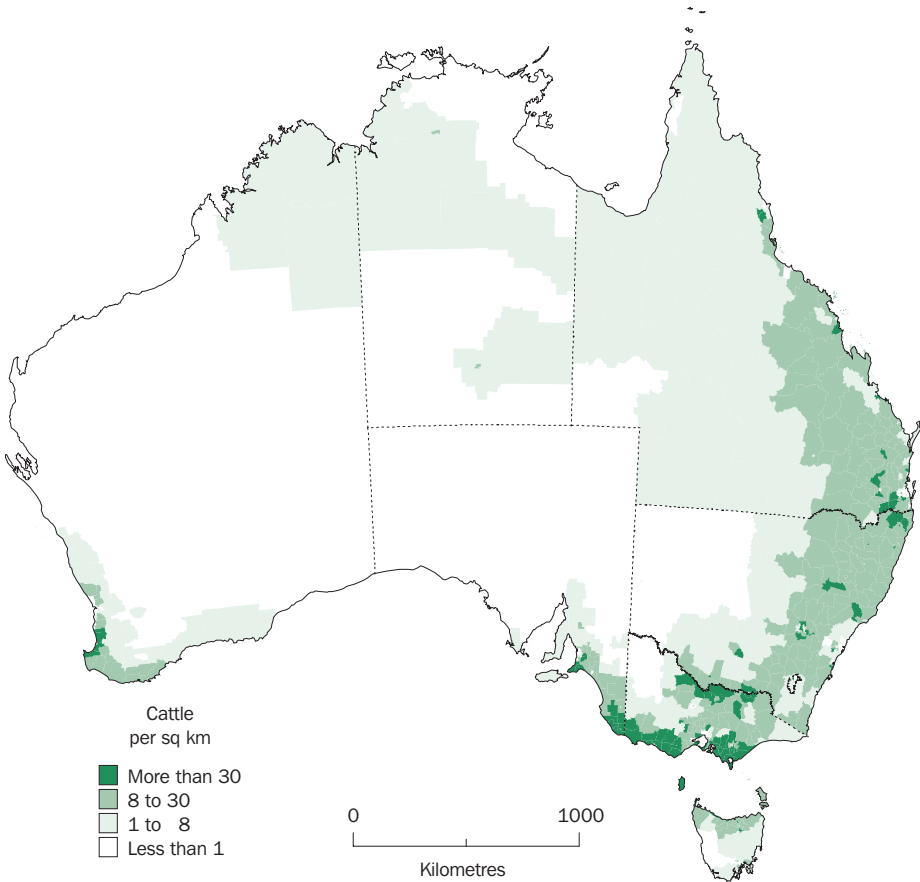
15.40    CATTLE, By State/Territory

|       | NSW   | Vic.  | Qld    | SA    | WA    | Tas. | NT    | Aust.(a)  |
|-------|-------|-------|--------|-------|-------|------|-------|-----------|
| Year  | '000  | '000  | '000   | '000  | '000  | '000 | '000  | '000      |
| 1992  | 5 697 | 3 574 | 10 005 | 1 016 | 1 649 | 593  | 1 334 | (b)23 880 |
| 1993  | 5 783 | 3 689 | 9 873  | 1 104 | 1 648 | 605  | 1 347 | (b)24 062 |
| 1994  | 6 515 | 4 189 | 9 942  | 1 202 | 1 806 | 679  | 1 435 | (b)25 758 |
| 1995  | 6 236 | 4 280 | 9 974  | 1 216 | 1 899 | 693  | 1 421 | (b)25 731 |
| 1996  | 6 390 | 4 396 | 10 214 | 1 219 | 1 924 | 718  | 1 503 | (b)26 377 |
| 1997p | 6 435 | 4 368 | 10 373 | 1 213 | 1 987 | 762  | 1 205 | (b)26 354 |

(a) Includes the Australian Capital Territory. (b) Excluding house cows and heifers.

Source: *Livestock and Livestock Products, Australia (7215.0)*; *Principal Agricultural Commodities, Australia, Preliminary, 1995–96 (7111.0)*.

15.41    CATTLE FOR ALL PURPOSES, Excluding House Cows — 31 March 1996



Source: *Agstats (7117.0)*.

## Dairying

Dairying is a major Australian rural industry, ranking fourth behind the wheat, wool and beef industries in terms of value of production. The preliminary estimate of the gross value of dairy production at farm gate prices in 1996–97 was \$2,903.2m (table 15.43), nearly 11% of the gross value of rural production. The gross value of this industry at an ex-factory level was about \$6,000m per year. The industry is also one of Australia's leading rural industries in terms of the downstream employment and processing it generates. Employment at related manufacturing, processing and farm establishments is nearly 60,000 people.

The entry of the United Kingdom, Australia's then largest market, into the European Union in 1973 forced the Australian dairy industry to become more internationally competitive and to develop new export trade links. This emphasis was reinforced with the introduction of the Kerin Plan on 1 July 1986, which directly linked domestic product prices to international market returns. Around 50% of Australian milk production is now exported in manufactured forms, with almost 80% of these sales destined for markets in Asia and the Middle East.

## Dairy production

There are areas in Australia where climate and natural resources are favourable to dairying and allow production to be based on year-round pasture grazing. This encourages efficient, low cost milk production. With the exception of several inland river schemes, pasture growth generally depends on natural rainfall. Most

non-irrigated dairy production is located in coastal fringe areas. Feedlot based dairying remains uncommon in Australia, although the use of supplementary feed, such as grains, has become more common in recent years.

While seasonal conditions continue to have some influence on yearly output, Australian milk production has risen steadily over the past seven years and in 1996–97 was 9,040 million litres (table 15.43), an increase of 4% compared with the previous year. This largely reflected productivity gains through a combination of farm and herd management techniques. Table 15.42 shows the number of milk cattle over recent years. The preliminary 1996–97 figure of 4,418 litres for average production per dairy cow was around a third higher than the levels of the early 1980s.

**15.42 MILK CATTLE**

|          | Bulls used or intended for service | Cows and heifers used or intended for production of milk or cream for sale |         | Total(a) |
|----------|------------------------------------|----------------------------------------------------------------------------|---------|----------|
|          |                                    | Cows (in milk and dry)                                                     | Heifers |          |
| 31 March | '000                               | '000                                                                       | '000    | '000     |
| 1992     | 31                                 | 1 652                                                                      | 749     | 2 432    |
| 1993     | 31                                 | 1 697                                                                      | 776     | 2 504    |
| 1994     | 36                                 | 1 786                                                                      | 856     | 2 678    |
| 1995     | (b)                                | 1 821                                                                      | (b)     | 2 740    |
| 1996     | (b)                                | 1 884                                                                      | (b)     | 2 808    |
| 1997p    | (b)                                | 2 046                                                                      | (b)     | 3 067    |

(a) Excludes house cows and heifers. (b) Not collected separately, included in total.

Source: AgStats (7117.0).

**15.43 WHOLE MILK, Production, Utilisation and Gross Value**

| Year     | Whole milk intake by factories |                                                |              |             |
|----------|--------------------------------|------------------------------------------------|--------------|-------------|
|          | Market milk sales by factories | Milk used in the manufacture of dairy products | Total intake | Gross value |
|          | mill. litres                   | mill. litres                                   | mill. litres | \$m         |
| 1991–92  | 1 794                          | 4 938                                          | 6 732        | 1 960.0     |
| 1992–93  | 1 810                          | 5 519                                          | 7 329        | 2 314.4     |
| 1993–94  | 1 845                          | 6 232                                          | 8 077        | 2 448.0     |
| 1994–95  | 1 893                          | 6 313                                          | 8 206        | 2 419.1     |
| 1995–96  | 1 905                          | 6 811                                          | 8 716        | p2 993.5    |
| 1996–97p | 1 920                          | 7 120                                          | 9 040        | 2 903.2     |

Source: Australian Dairy Corporation; Value of Principal Agricultural Commodities Produced, Australia, Preliminary, 1996–97 (7501.0).

### Dairy domestic market

Average annual per capita milk consumption by Australians has stabilised at around 100 litres since the mid-1980s. However, there have been substantial changes in the types of fresh milk consumed, with fat reduced and modified milks taking an increasing share of overall market milk sales.

In 1995–96, Australians consumed 10.6 kg of cheese per person, 9% more than was consumed in 1994–95.

### Sheep

New South Wales has been the State with the most sheep, except for a short period in the

early 1860s, when the flocks in Victoria were larger. Western Australia is presently the second largest sheep raising State, with Victoria third (table 15.44).

Sheep numbers reached a peak of 180 million in Australia in 1970. Following subsequent falls, by March 1990 flock numbers had risen to 170 million. However, poor market prospects for wool since 1990 have had a marked impact on the flock size and numbers have declined since then (table 15.45). Map 15.46 shows the distribution of sheep and lambs in Australia at 31 March 1996.

**15.44 SHEEP AND LAMBS**

|          | NSW   | Vic.  | Qld   | SA    | WA    | Tas.  | Aust.         |
|----------|-------|-------|-------|-------|-------|-------|---------------|
| 31 March | mill. | mill. | mill. | mill. | mill. | mill. | mill.         |
| 1992     | 53.6  | 24.8  | 15.3  | 16.1  | 34.1  | 4.3   | <b>148.2</b>  |
| 1993     | 48.1  | 23.6  | 13.4  | 15.7  | 33.0  | 4.3   | <b>138.1</b>  |
| 1994     | 46.5  | 23.4  | 11.5  | 14.7  | 32.0  | 4.3   | <b>132.6</b>  |
| 1995     | r40.5 | 21.4  | 11.6  | 13.2  | 30.2  | 3.9   | <b>r120.9</b> |
| 1996     | 41.1  | 22.0  | 10.7  | 13.6  | 29.8  | 3.9   | <b>121.1</b>  |
| 1997p    | 43.5  | 22.9  | 10.5  | 13.8  | 28.5  | 4.1   | <b>123.3</b>  |

Source: AgStats (7117.0); Selected Agricultural Commodities, Australia, Preliminary, 1996–97 (7112.0).

**15.45 SHEEP AND LAMBS**

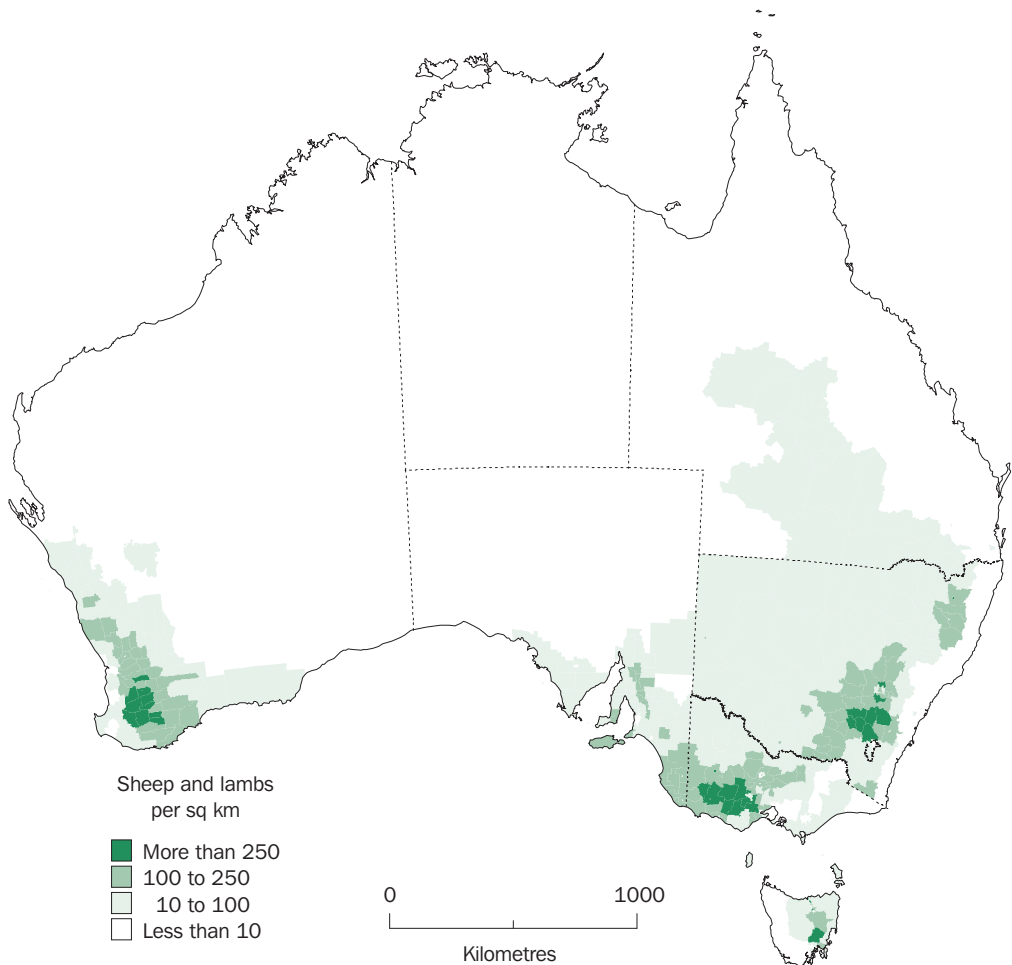
|                                  | 1992(a)      | 1993(a)      | 1994(a)      | 1995(a)      | 1996(a)      | 1997p(a)     |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                                  | mill.        | mill.        | mill.        | mill.        | mill.        | mill.        |
| Sheep (1 year and over)          |              |              |              |              |              |              |
| Rams                             | 1.6          | 1.4          | 1.4          | (b)          | (b)          | (b)          |
| Breeding ewes                    | 65.5         | 61.4         | 60.8         | (b)          | 57.2         | 58.6         |
| Other ewes                       | 7.9          | 6.6          | 5.9          | (b)          | (b)          | (b)          |
| Wethers                          | 45.5         | 40.3         | 34.8         | (b)          | (b)          | (b)          |
| All sheep                        | 120.5        | 109.7        | 102.8        | 94.0         | 91.7         | 91.9         |
| Lambs and hoggets (under 1 year) | 27.8         | 28.4         | 29.7         | 26.8         | 29.4         | 31.4         |
| <b>Total sheep and lambs</b>     | <b>148.2</b> | <b>138.1</b> | <b>132.6</b> | <b>120.9</b> | <b>121.1</b> | <b>123.3</b> |

(a) At 31 March. (b) Not separately collected.

Source: AgStats (7117.0); Selected Agricultural Commodities, Australia, Preliminary, 1996–97 (7112.0).



## 15.46 SHEEP AND LAMBS, Total Number — 31 March 1996



Source: Agstats (7117.0).

## Pigs

As table 15.47 shows, New South Wales is the largest State for pig numbers, followed by Queensland.

## 15.47 PIGS

|          | NSW  | Vic. | Qld  | SA   | WA   | Tas. | Aust.(a) |
|----------|------|------|------|------|------|------|----------|
| 31 March | '000 | '000 | '000 | '000 | '000 | '000 | '000     |
| 1992     | 799  | 431  | 560  | 420  | 318  | 40   | 2 570    |
| 1993     | 818  | 425  | 617  | 435  | 305  | 44   | 2 646    |
| 1994     | 834  | 460  | 682  | 440  | 312  | 46   | 2 775    |
| 1995     | 791  | 439  | 644  | 423  | 316  | 38   | 2 653    |
| 1996     | 710  | 458  | 603  | 412  | 314  | 26   | 2 526    |
| 1997p    | 798  | 508  | 666  | 381  | 304  | 24   | 2 684    |

(a) Includes the Northern Territory and the Australian Capital Territory.

Source: AgStats (7117.0).

## 15.48 POULTRY

|          | Hens and pullets<br>for egg production | Meat strain<br>chickens<br>(broilers) | Chickens          |       | Other poultry |               | Total all<br>poultry |
|----------|----------------------------------------|---------------------------------------|-------------------|-------|---------------|---------------|----------------------|
|          |                                        |                                       | Total chickens(a) | Ducks | Turkeys       | Other poultry |                      |
| 31 March | '000                                   | '000                                  | '000              | '000  | '000          | '000          | '000                 |
| 1991(b)  | 12 257                                 | 39 429                                | 54 330            | 364   | 1 426         | 442           | 56 562               |
| 1992(b)  | 10 735                                 | 44 318                                | 59 320            | 413   | 1 317         | (c)500        | 61 550               |
| 1993(b)  | 12 565                                 | 51 157                                | 63 722            | 404   | 1 093         | (c)330        | 69 951               |
| 1994(c)  | 12 788                                 | 50 153                                | 62 941            | 447   | 839           | 374           | 70 362               |
| 1995(d)  | 11 148                                 | 54 445                                | 65 593            | (e)   | (e)           | 2 088         | 67 681               |
| 1996(d)  | 10 119                                 | 58 236                                | 68 355            | 411   | 1 222         | 1 040         | 71 028               |

(a) Includes breeding stock. (b) Excludes poultry in Tasmania and turkeys in South Australia. (c) Excludes some poultry in Tasmania and turkeys in South Australia. (d) Excludes some poultry in Tasmania and other poultry in South Australia. (e) Not collected.

Source: *Livestock and Livestock Products, Australia* (7215.0); AgStats (7117.0).

## Poultry

Meat strain chickens are easily the largest category of poultry in Australia, followed by hens and pullets for egg production (table 15.48).

## Meat production and slaughtering

Tables 15.49 and 15.50 show details of slaughtering and meat production from abattoirs, and commercial poultry and other slaughtering establishments, and include estimates of animals slaughtered on farms and by country butchers. The data relate only to slaughtering for human consumption and do not include animals condemned or those killed for boiling down.

Production of sheep meats in Australia is closely associated with the wool industry. Sheep grazing often occurs on mixed farms in conjunction with

beef and/or grain enterprises, and in some areas producers specialise in lamb production. The supply of sheep meat depends greatly on seasonal conditions, decisions to build up or reduce flock numbers, expectations of wool prices, live sheep exports and the pattern of domestic consumption of meat. Preliminary estimates for 1996–97 show substantial increases in beef and chicken production, small rises in veal and lamb production and falls in mutton and pig meat production (table 15.49).

Significant changes have taken place in the pig producing industry in recent years. Capital investment and corporate takeovers have seen the emergence of a few large companies producing 30% of all pigs sold in Australia. These moves, on top of the trend to more intensive and efficient production techniques, have seen pig meat production rise steadily since 1982 to reach a peak in 1994–95 of 351,330 tonnes. Data for 1996–97 show the fall in 1995–96 continuing in 1996–97.

## 15.49 PRODUCTION OF MEAT(a)

| Year     | Carcass weight |        |        |        |          | Dressed weight(b)(c)  |                     |
|----------|----------------|--------|--------|--------|----------|-----------------------|---------------------|
|          | Beef           | Veal   | Mutton | Lamb   | Pig meat | Total all<br>chickens | Total<br>poultry(d) |
|          | '000 t         | '000 t | '000 t | '000 t | '000 t   | '000 t                | '000 t              |
| 1991–92  | 1 753          | 38     | 392    | 275    | 336      | 2 794                 | 452                 |
| 1992–93  | 1 787          | 39     | 370    | 273    | 328      | 2 798                 | 468                 |
| 1993–94  | 1 786          | 39     | 381    | 267    | 344      | 2 817                 | 500                 |
| 1994–95  | 1 766          | 38     | 354    | 268    | 351      | 2 776                 | 499                 |
| 1995–96  | 1 711          | 34     | 310    | 265    | 334      | 2 653                 | 516                 |
| 1996–97p | 1 775          | 38     | 308    | 275    | 325      | 2 721                 | 532                 |

(a) Excludes offal. (b) Excludes Tasmania, the Northern Territory and the Australian Capital Territory. (c) Dressed weight of whole birds, pieces and giblets. (d) Includes other fowls, turkeys, ducks and drakes.

Source: *Livestock and Livestock Products, Australia* (7215.0).

**15.50 LIVESTOCK AND POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION**

|          | Cattle     | Calves     | Sheep      | Lambs      | Pigs       | Chickens(a)(b) | Other fowls(c)<br>and turkeys(b) | Ducks and<br>drakes(b) |
|----------|------------|------------|------------|------------|------------|----------------|----------------------------------|------------------------|
| Year     | mill. head | mill. head | mill. head | mill. head | mill. head | mill. head     | mill. head                       | mill. head             |
| 1991–92  | 7.6        | 1.1        | 18.8       | 15.8       | 5.1        | (c)293.5       | 8.7                              | 2.2                    |
| 1992–93  | 7.4        | 1.0        | 17.5       | 15.4       | 5.0        | 304.1          | 8.4                              | 2.3                    |
| 1993–94  | 7.3        | 1.0        | 17.8       | 15.0       | 5.2        | 329.5          | 8.0                              | 2.5                    |
| 1994–95  | 7.2        | 1.0        | 17.5       | 15.3       | 5.1        | 330.5          | 8.7                              | 2.3                    |
| 1995–96  | 6.9        | 1.0        | 14.6       | 14.2       | 4.8        | 336.4          | 9.6                              | 2.6                    |
| 1996–97p | 7.3        | 1.1        | 14.9       | 14.8       | 4.6        | 345.1          | 10.0                             | 3.1                    |

(a) Comprises broilers, fryers and roasters. (b) Excludes Tasmania, the Northern Territory and the Australian Capital Territory.

(c) Comprises hens, roosters, etc.

Source: *Livestock and Livestock Products, Australia (7215.0)*.

Table 15.51 shows a time series of the gross value of livestock slaughterings. The preliminary estimate of value of slaughterings and other disposals has remained constant in 1996–97 after a sharp fall the previous year.

In 1996–97, Japan continued to be the best customer for Australian beef although the 297,376 tonnes purchased was 13% less than the previous year's shipments. Liberalisation of the Japanese market in 1991 involved the removal of import quotas in exchange for a percentage of customs value. Offsetting the loss of sales to

Japan, the United States bought 220,982 tonnes, 16% more than in 1995–96, and Canada raised its take by 18% to 35,641 tonnes. The United Kingdom imported 16% less beef in 1996–97, accepting 8,559 tonnes.

Table 15.52 shows a time series of the volume of exports of fresh, chilled or frozen meat, which is dominated by bone-out beef. Exports of bone-in mutton and bone-in lamb increased 14% and 16% respectively, but exports of bone-out mutton fell 21% in 1996–97.

**15.51 GROSS VALUE OF LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS(a)**

|          | Cattle and calves | Sheep and lambs | Pigs  | Poultry | Total(b) |
|----------|-------------------|-----------------|-------|---------|----------|
| Year     | \$m               | \$m             | \$m   | \$m     | \$m      |
| 1990–91  | 3 869.4           | 364.2           | 691.0 | 788.3   | 5 721.0  |
| 1991–92  | 3 801.9           | 460.6           | 658.6 | 778.0   | 5 738.1  |
| 1992–93  | 3 839.2           | 663.0           | 649.5 | 833.5   | 6 023.5  |
| 1993–94  | 4 433.5           | 793.6           | 660.5 | 929.3   | 6 852.9  |
| 1994–95  | 4 213.5           | 833.7           | 630.6 | 902.0   | 6 615.7  |
| 1995–96p | 3 575.9           | 1 035.7         | 598.1 | 948.1   | 6 193.0  |
| 1996–97p | 3 387.9           | 1 060.4         | 661.9 | 1 064.5 | 6 210.4  |

(a) Includes adjustment for net exports of live animals. (b) Includes goats and buffalo.

Source: *Value of Agricultural Commodities Produced, Australia (7503.0)*.

**15.52 EXPORTS OF FRESH, CHILLED OR FROZEN MEAT(a)**

|          | Beef(b)(c) |          | Veal(b) |          | Mutton(b) |          | Lamb(b) |          | Pork   |
|----------|------------|----------|---------|----------|-----------|----------|---------|----------|--------|
|          | Bone-in    | Bone-out | Bone-in | Bone-out | Bone-in   | Bone-out | Bone-in | Bone-out | Meat   |
| Year     | '000 t     | '000 t   | '000 t  | '000 t   | '000 t    | '000 t   | '000 t  | '000 t   | '000 t |
| 1991–92  | 100.0      | 691.5    | 1.5     | 5.7      | 103.7     | 75.0     | 39.4    | 4.6      | 5.0    |
| 1992–93  | 81.0       | 739.9    | 2.1     | 5.4      | 80.2      | 77.4     | 46.7    | 5.5      | 7.0    |
| 1993–94  | 62.7       | 742.4    | 1.3     | 5.8      | 97.9      | 71.0     | 52.7    | 5.2      | 5.9    |
| 1994–95  | 59.8       | 716.8    | 2.0     | 6.9      | 103.3     | 65.4     | 48.5    | 4.6      | 5.5    |
| 1995–96  | 50.7       | 702.6    | 1.7     | 5.3      | 81.0      | 64.2     | 46.3    | 7.7      | 5.6    |
| 1996–97p | 48.4       | 690.9    | 1.2     | 3.8      | 92.0      | 50.6     | 53.9    | 8.3      | 6.6    |

(a) Excludes offal. (b) Factors can be applied to beef, veal, mutton and lamb bone-out figures to derive bone-in carcass weight which, when added to bone-in figures, shows total exports in carcass weight. The factor for beef and veal is 1.5 and that for mutton and lamb 2.0 (Source: Australian Meat and Livestock Corporation). (c) Includes buffalo meat.

Source: *Foreign Trade Australia; Merchandise Imports and Exports, 1995–96 (5410.0)*.

**15.53 LIVE SHEEP AND CATTLE EXPORTS(a)**

| Year     | Live sheep exports |              |             |               | Live cattle exports |              |             |               |
|----------|--------------------|--------------|-------------|---------------|---------------------|--------------|-------------|---------------|
|          | No.                | Gross weight | Gross value | Unit value(b) | No.                 | Gross weight | Gross value | Unit value(b) |
|          | '000               | '000 t       | \$'000      | \$            | '000                | '000 t       | \$'000      | \$            |
| 1990-91  | 3 140.5            | 162.0        | 45 612      | 14.40         | 94.9                | 31.3         | 50 407      | 542.30        |
| 1991-92  | 4 395.6            | 258.0        | 87 717      | 20.00         | 107.4               | 33.2         | 54 930      | 511.40        |
| 1992-93  | 5 097.1            | 270.5        | 121 933     | 23.92         | 148.6               | 50.4         | 69 847      | 470.20        |
| 1993-94  | 5 429.8            | 287.4        | 148 907     | 27.42         | 234.7               | 79.9         | 115 020     | 489.97        |
| 1994-95  | 5 633.6            | 290.2        | 184 291     | 32.35         | 385.7               | 136.5        | 201 948     | 523.52        |
| 1995-96  | 5 879.9            | 296.9        | 226 911     | 38.59         | 615.9               | 219.0        | 343 699     | 558.07        |
| 1996-97p | 5 245.1            | 270.2        | 189 225     | 36.08         | 861.4               | 312.7        | 426 758     | 495.40        |

(a) Excludes live sheep and cattle for breeding. (b) Obtained by dividing the gross value by the number of sheep, or cattle.

Source: *Foreign Trade, Australia: Merchandise Imports and Exports, 1995-96 (5410.0)*.

Table 15.53 shows a time series of the number, gross weight, gross value and unit value of live sheep and cattle exports. While the number, weight and gross value of live sheep exports fell in 1996-97 compared with 1995-96, the number, gross weight and gross value of live cattle exports rose significantly.

## Wool

### Wool production

Shorn wool ('greasy wool') contains an appreciable amount of grease, dirt, vegetable matter and other extraneous material. The exact quantities of these impurities in the fleece vary with climatic and pastoral conditions, seasonal fluctuations and the breed and condition of the sheep. It is, however, the clean wool fibre that is ultimately consumed by the textile industry, and

the term 'clean yield' is used to express the net wool fibre content present in greasy wool.

Following a gradual upward trend of clean yields to 66% of the Australian clip in 1992-93, this has now levelled off at 65% in 1996-97.

Preliminary estimates of the gross value of wool produced in 1996-97 are 57% lower than in 1988-89, the peak year in the wool boom of the 1980s and 1% below the 1995-96 gross value (table 15.54).

### Wool receivals

The total amounts of taxable wool received by brokers and purchased by dealers in recent years are shown in table 15.55. It excludes wool received by brokers on which tax had already been paid by other dealers (private buyers) or brokers.

**15.54 SHEARING, WOOL PRODUCTION AND VALUE**

| Year     | Sheep and lambs shorn | Average fleece weight | Wool production |               |          |                |
|----------|-----------------------|-----------------------|-----------------|---------------|----------|----------------|
|          |                       |                       | Total wool      |               | Quantity | Gross value(b) |
|          |                       |                       | Shorn wool      | Other wool(a) |          |                |
|          | mill.                 | kg                    | '000 t          | '000 t        | '000 t   | \$m            |
| 1991-92  | 181.2                 | 4.42                  | 801.2           | 73.7          | 875.0    | 2 980.0        |
| 1992-93  | 179.0                 | 4.55                  | 815.1           | 54.3          | 869.4    | 2 569.0        |
| 1993-94  | 148.7                 | 4.49                  | 775.8           | 52.6          | 828.3    | 2 449.1        |
| 1994-95  | 156.3                 | 4.37                  | 679.4           | 48.5          | 731.0    | 3 317.9        |
| 1995-96  | 155.3                 | 4.37                  | 674.9           | 48.5          | 726.4    | 2 548.5        |
| 1996-97p | 156.2                 | 4.37                  | 686.5           | 46.6          | 730.0    | 2 522.4        |

(a) Comprises dead and fellmongered wool, and wool exported on skins. (b) Gross value is based for shorn wool upon the average price realised for greasy wool sold at auction and, for skin wools, on prices recorded by fellmongers and skin exporters.

Source: *Value of Agricultural Commodities Produced, Australia (7503.0)*; *Livestock and Livestock Products, Australia (7215.0)*.

**15.55 TAXABLE WOOL RECEIVALS**

| Year     | Receivals |         |                           | Dealers as<br>% of total<br>receivals |
|----------|-----------|---------|---------------------------|---------------------------------------|
|          | Brokers   | Dealers | Brokers<br>and<br>dealers |                                       |
|          | '000 t    | '000 t  | '000 t                    | %                                     |
| 1991–92  | 734.2     | 102.3   | 836.6                     | 12.2                                  |
| 1992–93  | 703.2     | 140.8   | 844.1                     | 16.8                                  |
| 1993–94  | 635.2     | 149.0   | 784.2                     | 19.0                                  |
| 1994–95  | 566.6     | 112.8   | 679.4                     | 16.6                                  |
| 1995–96  | 548.3     | 93.0    | 641.3                     | 14.5                                  |
| 1996–97p | 564.2     | 119.7   | 683.9                     | 17.5                                  |

Source: *Livestock and Livestock Products, Australia* (7215.0).

**Wool marketing arrangements**

A “free marketing” system operates in the wool industry with no direct government involvement and most wool being sold at auction.

The Reserve Price Scheme, which was operated from 1974, was suspended in February 1991. It had become unworkable due to the massive accumulation of wool in the stockpile and the substantial debt which had been incurred. The wool stockpile at the end of 1990–91 was 4,623,938 bales.

In 1994 the Australian Wool Research and Promotion Organisation (AWRAP) integrated its operations with the International Wool Secretariat (IWS) to form a strong customer-oriented international promotion and research organisation focused on building sustainable demand for wool and wool products. While AWRAP and IWS remain separate legal

entities, all operational activities are now conducted under the name of IWS. AWRAP conducts certain statutory activities independent of IWS. Recently the IWS was relaunched as IWS International Pty Ltd.

From 1 February 1994, the Australian Wool Exchange (AWEX) took over responsibility for the wool auction system. AWEX is not a statutory body and cannot compulsorily collect levies, and is run on a commercial basis. Its major roles include building and running a self-regulating wool selling structure and a market reporting service of behalf of the wool trade. To achieve this goal, AWEX is exploring the advantages and disadvantages of selling wool by different methods. This is illustrated by the ongoing trials involving sale of wool by description without display samples.

Sales of wool from the stockpile are controlled by Wool International, the statutory authority in charge of the stockpile. Most wool is sold forward from the stockpile by private treaty. From 1 July 1997, Wool International is required to deliver a minimum of 90,000 bales and a maximum of 350,000 bales from the stockpile per quarter. Further, it is required to deliver the last bale of stockpile wool by 31 December 2000. It is also required to sell the stockpile so as to foster the profitability and efficiency of the wool industry and maximise the value of stockpile wool. Revenue from sales from the stockpile is used to repay the commercially funded, government guaranteed debt. Surplus funds will be distributed to those who paid wool-tax over the period 1993–94 to 1995–96.

Beekeeping

The beekeeping industry consists of 300–400 full-time apiarists, who account for about 70% of Australian honey production, and a large number of part-time apiarists who produce the rest. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to obtain a continuous supply of nectar for honey from suitable flora. While honey production remains the predominant sector of the industry, production of breeding stock and provision of pollination services are also significant. Table 15.56 provides a time series of statistics about the industry.

Emerging agricultural industries

The list of agricultural commodities that are produced in Australia has continued to expand. Some, such as goat (either for fibre, meat or milk) and deer (meat and velvet) production, are now well established. More recent developments undertaken by the livestock farming industry include:

- sheep milk farming;
- emu farming;
- ostrich farming;
- rabbit farming;
- crocodile farming; and

- alpaca farming.

In horticulture, established crops now include tea and coffee. Other crops more recently introduced include a large variety of fruits and vegetables (mainly from Asia), herbs and pyrethrum, an important oil.

Apparent consumption of foodstuffs

Estimates of the consumption of foodstuffs in Australia are compiled by deducting exports from the sum of production and imports and allowing for recorded movement in stocks of the various commodities. The term consumption is used in a specialised sense. The estimates derived are broadly the quantities available for consumption at a particular level of distribution, that is, ex-market, ex-store or ex-factory depending on the method of marketing and/or processing. Because consumption of foodstuffs is measured, in general, at producer level, no allowance is made for wastage before they are consumed. The effect of ignoring wastage is ultimately to overstate consumption to some extent.

The estimates of consumption per capita have been obtained by using the mean resident population for the period.

Table 15.57 shows the changes in trends in the consumption of various foodstuffs since 1938–39.

15.56 BEEKEEPING

|            |                     | Honey produced     |       |          |                                        | Beeswax produced |          |                |
|------------|---------------------|--------------------|-------|----------|----------------------------------------|------------------|----------|----------------|
|            |                     | Number of beehives |       | Quantity | Average production per productive hive | Gross value      | Quantity | Gross value(b) |
|            |                     | Productive(a)      | Total |          |                                        |                  |          |                |
| Year       | Number of apiarists | '000               | '000  | '000 t   | kg                                     | \$'000           | tonnes   | \$'000         |
| 1990–91    | 726                 | 290                | 384   | 21       | 71                                     | 26 078           | 381      | 1 389          |
| 1991–92    | 651                 | 264                | 366   | 19       | 72                                     | 25 008           | 390      | 1 305          |
| 1992–93    | 686                 | 278                | 362   | 23       | 81                                     | 31 499           | 422      | 1 522          |
| 1993–94(c) | 1 659               | 381                | 534   | 26       | 68                                     | 32 923           | 620      | 2 648          |
| 1994–95(c) | 1 271               | 314                | 465   | 19       | 61                                     | 24 621           | 341      | 1 475          |
| 1995–96(c) | 1 351               | 380                | 489   | 26       | 68                                     | p39 500          | 596      | p3 238         |

(a) Beehives from which honey was taken. (b) Includes pollen. (c) Estimated Value of Agricultural Operations (EVAO) \$5,000.  
Source: AgStats (7117.0).

## 15.57 APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS

| Commodity                                                | Units | Average 3 years ended |         |         |         |         |         |         |          |
|----------------------------------------------------------|-------|-----------------------|---------|---------|---------|---------|---------|---------|----------|
|                                                          |       | 1938–39               | 1948–49 | 1958–59 | 1968–69 | 1978–79 | 1988–89 | 1994–95 | 1995–96p |
| Meat (carcass equivalent weight)                         |       |                       |         |         |         |         |         |         |          |
| Beef                                                     | kg    | n.a.                  | n.a.    | n.a.    | n.a.    | n.a.    | 39.5    | r34.7   | 33.0     |
| Veal                                                     | kg    | n.a.                  | n.a.    | n.a.    | n.a.    | n.a.    | 1.5     | 1.5     | 1.4      |
| Beef and veal                                            | kg    | 63.6                  | 49.5    | 56.2    | 40.0    | 64.8    | 41.1    | r36.2   | 34.4     |
| Lamb                                                     | kg    | 6.8                   | 11.4    | 13.3    | 20.5    | 14.4    | 14.9    | r11.5   | 11.0     |
| Mutton                                                   | kg    | 27.2                  | 20.5    | 23.1    | 18.8    | 3.6     | 6.8     | r5.7    | 4.9      |
| Pigmeat(a)                                               | kg    | 3.9                   | 3.2     | 4.6     | 6.7     | 13.3    | 18.1    | r19.4   | 18.2     |
| Total meat                                               | kg    | 101.5                 | 84.6    | 97.2    | 85.9    | 96.1    | 80.8    | r72.7   | 68.5     |
| Offal and meat, n.e.i.                                   | kg    | 3.8                   | 4.0     | 5.2     | 5.1     | 5.9     | 2.5     | r1.7    | 1.2      |
| Total meat and meat products (carcass equivalent weight) | kg    | 118.5                 | 103.0   | 112.4   | 98.8    | 102.0   | 83.3    | r74.5   | 69.7     |
| Canned meat (canned weight)                              | kg    | 1.0                   | 1.2     | 1.9     | 2.2     | 1.6     | n.a.    | n.a     | n.a      |
| Bacon and ham (cured carcass weight)                     | kg    | 4.6                   | 5.3     | 3.2     | 3.6     | 6.0     | 6.9     | n.a     | n.a.     |
| Poultry                                                  |       |                       |         |         |         |         |         |         |          |
| Poultry (dressed weight)                                 | kg    | n.a.                  | n.a.    | n.a.    | 8.3     | 17.1    | 24.2    | r28.1   | 27.4     |
| Milk and milk products                                   |       |                       |         |         |         |         |         |         |          |
| Market milk (fluid whole litres)                         | L     | 106.4                 | 138.7   | 128.7   | 128.2   | 100.5   | 101.0   | 103.0   | 104.3    |
| Cheese (natural equivalent weight)                       | kg    | 2.0                   | 2.5     | 2.6     | 3.5     | 5.3     | 9.0     | r10.3   | 10.6     |
| Oils and fats                                            |       |                       |         |         |         |         |         |         |          |
| Butter                                                   | kg    | 14.9                  | 11.2    | 12.3    | 9.8     | 5.1     | 2.9     | r3.1    | 3.0      |
| Table margarine                                          | kg    | 0.4                   | 0.4     | n.a.    | 1.5     | 5.4     | 6.8     | 5.3     | 5.0      |
| Other margarine                                          | kg    | 1.8                   | 2.4     | 2.2     | 3.4     | 3.1     | 2.2     | 2.0     | 2.2      |
| Total margarine                                          | kg    | 2.2                   | 2.8     | n.a.    | 4.9     | 8.5     | 9.0     | 7.3     | 7.2      |
| Beverages                                                |       |                       |         |         |         |         |         |         |          |
| Tea                                                      | kg    | 3.1                   | 2.9     | 2.7     | 2.3     | 1.7     | 1.2     | 0.9     | 0.9      |
| Coffee(b)                                                | kg    | 0.3                   | 0.5     | 0.6     | 1.2     | 1.6     | 2.0     | 2.2     | 2.2      |
| Aerated and carbonated waters                            | L     | n.a.                  | n.a.    | n.a.    | 47.3    | 67.4    | 79.9    | r110.6  | 114.3    |
| Beer                                                     | L     | 53.2                  | 76.8    | 99.7    | 113.5   | 133.2   | 115.4   | r96.9   | 95.4     |
| Wine                                                     | L     | 2.7                   | 5.9     | 5.0     | 8.2     | 14.7    | 19.1    | r18.3   | 18.1     |
| Spirits (litres alcohol)                                 | L     | 0.5                   | 0.8     | 0.7     | 0.9     | 1.2     | 1.3     | 1.4     | 1.4      |

(a) Includes pigmeat for bacon and ham. (b) Coffee and coffee products in terms of roasted coffee.

Source: *Apparent Consumption of Foodstuffs and Nutrients, Australia (4306.0)*.

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## Forestry

### Introduction

Forests are an important sustainable natural resource providing a wide range of indispensable products and benefits to the community.

Forest vegetation cover protects the soil from water and wind erosion, reduces flooding and siltation of water bodies and maintains water quality. Forests provide habitats for a wide variety of native animals and plants. They also act as a sink to absorb greenhouse gases.

The forests and wood products industries based on native and plantation forests contribute substantially to Australia's economy, especially to employment in regional areas. Forests are also valuable ecosystems providing a gene pool of great diversity for scientific investigation; a

source of honey, oils, gums, resins and medicines; and a resource base for education, tourism, recreation and other purposes. Forests cannot necessarily provide for all uses at the same time, but careful management will ensure that forests provide multiple benefits in the long term for the Australian community.

Farm forestry is becoming increasingly important as a potential commercial source of wood. A broad range of programs has been implemented by governments and private organisations to promote tree planting on Australian farms.

### Forest estate

#### Native forest

Native forest is defined in this chapter as 'an area, incorporating all living and non-living components, dominated by trees having usually a single stem and a mature or potentially mature

#### 16.1 NATIVE FOREST AREAS, By Dominant Canopy and Tenure — 30 June 1997

|                                       | NSW           | Vic.         | Qld           | SA           | WA            | Tas.         | NT            | ACT         | Aust.          |
|---------------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|-------------|----------------|
|                                       | '000<br>ha.   | '000<br>ha.  | '000<br>ha.   | '000<br>ha.  | '000<br>ha.   | '000<br>ha.  | '000<br>ha.   | '000<br>ha. | '000<br>ha.    |
| CLASSIFIED BY DOMINANT CANOPY SPECIES |               |              |               |              |               |              |               |             |                |
| Eucalypt                              |               |              |               |              |               |              |               |             |                |
| Tall                                  | 2 097         | 2 825        | 1 126         | 2            | 171           | 250          | —             | 72          | 6 543          |
| Medium                                | 12 842        | 2 986        | 28 511        | 497          | 20 815        | 1 901        | 23 849        | 48          | 91 450         |
| Low                                   | 1 163         | 76           | 2 340         | 316          | 3 431         | 86           | 7 288         | —           | 14 700         |
| Mallee                                | 1 827         | 958          | —             | 4 005        | 4 973         | —            | —             | —           | 11 764         |
| Unknown                               | —             | —            | 6             | —            | —             | —            | —             | —           | 6              |
| <i>Total eucalypt</i>                 | 17 929        | 6 845        | 31 984        | 4 820        | 29 390        | 2 237        | 31 138        | 120         | 124 463        |
| Acacia                                | 944           | 17           | 4 603         | 307          | 3 986         | 3            | 2 439         | —           | 12 298         |
| Melaleuca                             | 202           | 18           | 2 643         | 2            | 155           | —            | 1 072         | —           | 4 093          |
| Rainforest                            | 209           | 3            | 2 567         | —            | 7             | 545          | 252           | —           | 3 583          |
| Casuarina                             | 802           | —            | 62            | 147          | 40            | (a)          | —             | —           | 1 052          |
| Mangrove                              | 7             | 5            | 398           | 20           | 173           | —            | 442           | —           | 1 045          |
| Callitris                             | 382           | 37           | 309           | 139          | —             | —            | —             | —           | 867            |
| Other                                 | 312           | 360          | 6 490         | 63           | 1 048         | 118          | 43            | —           | 8 435          |
| <b>Total</b>                          | <b>20 787</b> | <b>7 285</b> | <b>49 056</b> | <b>5 499</b> | <b>34 800</b> | <b>2 904</b> | <b>35 385</b> | <b>120</b>  | <b>155 835</b> |
| CLASSIFIED BY TENURE                  |               |              |               |              |               |              |               |             |                |
| Multiple Use Forest(a)                | 3 095         | 3 346        | 3 983         | 27           | 1 612         | 1 285        | —             | 5           | 13 351         |
| Nature Conservation Reserve(b)        | 3 060         | 2 710        | 2 870         | 1 252        | 4 364         | 523          | 2 709         | 93          | 17 580         |
| Other Crown Land(c)                   | 605           | 165          | 1 051         | 12           | 13 206        | 296          | 258           | 2           | 15 597         |
| Leasehold(d)                          | 5 966         | —            | 23 996        | 1 866        | 14 025        | —            | 20 236        | 13          | 66 103         |
| <i>Total public</i>                   | 12 726        | 6 221        | 31 900        | 3 157        | 33 207        | 2 104        | 23 203        | 113         | 112 631        |
| Private                               | 8 046         | 1 038        | 17 111        | 2 327        | 1 502         | 801          | 11 187        | 7           | 42 018         |
| Unresolved tenure                     | 15            | 26           | 44            | 15           | 90            | —            | 995           | —           | 1 186          |
| <b>Total</b>                          | <b>20 787</b> | <b>7 285</b> | <b>49 056</b> | <b>5 499</b> | <b>34 800</b> | <b>2 904</b> | <b>35 385</b> | <b>120</b>  | <b>155 835</b> |

(a) Publicly owned land managed for multiple use including wood production. (b) Public land on which wood production is excluded (National Parks, etc.). (c) Reserved areas of educational, scientific and other public institutional land, including easements, defence land, and other minor tenure classifications. (d) Crown land where the right to harvest or clear land must be approved by State/Territory governments. Often known as pastoral leases.

Source: National Forest Inventory 1997.

stand height exceeding 2 metres and with an existing or potential crown cover of overstorey strata about equal to or greater than 20%.' This definition includes Australia's diverse native forests, regardless of age. It is also sufficiently broad to encompass areas of trees that are sometimes described as woodlands.

Based on this definition, the total area of native forest at 30 June 1997 was estimated at 155.8 million hectares (table 16.1), which is about 20% of Australia's land area.

To date, the term 'forest' has referred to ecosystems dominated by tall, relatively densely spaced trees, and 'woodlands' has been used where the trees are smaller and more widely spaced or open. However, at times 'forest' has been broadened to include woodlands, or narrowed to equate to only 'commercially exploitable trees' or trees generally more than 20 metres high. The difficulty in using the apparently simple terms 'forest' and 'woodlands' is that there has always been debate about where the distinction between them should lie.

The above definition is based on the 1992 National Forest Policy Statement (NFPS), modified to reduce uncertainty relating to crown cover and height. The NFPS definition refers to 'usually' single stemmed trees, which recognises that mallees, Australia's multi-stemmed eucalypt trees, must be included. To make this possible, the lower tree height limit has been set at two metres, a reduction from five metres. The full definition, which requires the vegetation to be of tree formation, excludes shrublands even if they are higher than two metres. This reduction in the minimum height makes no significant difference to the total area of forest, adding only about 4–5% to the total.

There is currently no national standard used for mapping tree height. Height information has either been collected or reclassified by the National Forest Inventory into three categories:

- low: 2 to 10 metres
- medium: greater than 10 metres, up to 30 metres
- tall: greater than 30 metres.

Of the 155.8 million hectares of native forest at 30 June 1997, 112.6 million hectares (72%) were publicly owned and 42 million hectares (27%) were on private land. Of the publicly owned forests, 17.6 million hectares (16%) were in Nature Conservation Reserves, 13.4 million

hectares (12%) were managed by State forest authorities for various uses, including wood production, 15.6 million hectares (14%) were on other Crown land, and 66.1 million hectares (59%) were on leasehold tenure.

## Plantations

The first report of the National Plantation Inventory (NPI) of Australia (1997) brings together comprehensive information on Australia's standing plantation forest resources at regional and national levels. The NPI project was established to allow up-to-date quantitative reporting of Australia's plantation resource (both hardwood and softwood) based on growers' information. This includes location, area, species and age of plantations.

A small proportion of Australia's land is covered by plantations. Australia has around 1.04 million hectares (table 16.2) of standing plantations, planted to the end of 1994. Of these, 883,840 hectares are softwood (mostly *Pinus radiata*) and 158,640 hectares are hardwood. While planting information post-1994 was provided to the NPI, this information was not nationally comprehensive, and so it was not brought into the national/State summaries of plantation areas.

Under the National Forest Policy Statement (NFPS) agreed to by the Commonwealth, State and Territory Governments in 1992, Australia is committed to expanding its plantation estate to provide additional resources for the forestry sector. The Commonwealth Government has supported the expansion of Australia's plantation resource base for many years. For instance, the National Afforestation Program (NAP) was established in 1987–88 as a three year grants program to stimulate an expansion in the commercial hardwood timber resource and to assist in land rehabilitation through broadacre commercial plantations (including farm forestry).

The Government has continued to support and stimulate commercial plantation development on cleared agricultural land through the Farm Forestry Program (FFP) and the Community Rainforest Reafforestation Program (CRRP). The Government announced the implementation of a range of measures to encourage plantation and farm forestry development in the Wood and Paper Industry Strategy, issued in December 1995.

In July 1996, the Commonwealth Minister for Primary Industries and Energy, who is also Chairman (Forestry) of the Ministerial Council

## 16.2 PLANTATION AREAS, Classified By Species — 31 March 1995

|                    | NSW            | Vic.           | Qld            | SA             | WA             | Tas.           | NT           | ACT           | Aust.            |
|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|---------------|------------------|
| Species group      | ha.            | ha.            | ha.            | ha.            | ha.            | ha.            | ha.          | ha.           | ha.              |
| <b>Softwood</b>    |                |                |                |                |                |                |              |               |                  |
| Pinus radiata      | 222 997        | 195 195        | 2 269          | 99 521         | 61 125         | 47 236         | —            | 14 596        | 642 940          |
| Pinus elliottii    | 4 701          | —              | 68 183         | —              | —              | —              | —            | —             | 72 880           |
| Pinus pinaster     | —              | 761            | —              | 442            | 27 678         | —              | —            | —             | 28 880           |
| Pinus caribaea     | —              | —              | 51 739         | —              | —              | —              | 2 419        | —             | 54 160           |
| Araucaria species  | 1 755          | —              | 43 547         | —              | —              | —              | —            | —             | 45 300           |
| Other              | 8 163          | 73             | 2 957          | 1 944          | —              | 24 736         | 1 806        | —             | 39 680           |
| <b>Total</b>       | <b>237 616</b> | <b>196 029</b> | <b>168 694</b> | <b>101 907</b> | <b>88 803</b>  | <b>71 972</b>  | <b>4 225</b> | <b>14 596</b> | <b>883 840</b>   |
| <b>Hardwood</b>    |                |                |                |                |                |                |              |               |                  |
| Eucalyptus species | 32 631         | 19 307         | 1 295          | 1 038          | 42 042         | 62 018         | —            | 38            | 158 370          |
| Populus species    | —              | 40             | —              | —              | —              | —              | —            | —             | 40               |
| Other              | 5              | —              | —              | —              | —              | —              | —            | 225           | 230              |
| <b>Total</b>       | <b>32 636</b>  | <b>19 347</b>  | <b>1 295</b>   | <b>1 038</b>   | <b>42 042</b>  | <b>62 018</b>  | <b>—</b>     | <b>263</b>    | <b>158 640</b>   |
| <b>Total</b>       | <b>270 250</b> | <b>215 380</b> | <b>169 990</b> | <b>102 950</b> | <b>130 850</b> | <b>133 990</b> | <b>4 230</b> | <b>14 860</b> | <b>1 042 500</b> |

Source: National Plantation Inventory 1997.

on Forestry, Fisheries and Aquaculture (MCFFA), announced that the third meeting of the Council agreed to a national goal of trebling Australia's forest plantations estate by the year 2020. This will enhance growth in Australia's forest industry and the contribution made by plantations to the Australian economy, rural communities and regional development.

### Wood and paper products

Australia's wood and paper products industries are important components of Australia's primary and secondary industries. They are particularly important in providing economic development and employment in many regions of rural Australia. The industries include hardwood and softwood sawmilling, plywood and panels manufacturing, woodchip production and export and the pulp and paper industries. Just over 63,000 people are directly employed in growing and harvesting of wood and the manufacture and processing of wood and paper products (table 16.3). The wood and paper products industries contribute about 2% to Gross Domestic Product. In 1994–95, the value of turnover in the wood and paper products industries was \$11.3b, of which wood processing establishments (log sawmilling, timber dressing and other wood product manufacturing) contributed turnover of \$6.2b.

In 1995–96 total roundwood removed from forests fell by 5% to nearly 18.6 million cubic metres. While the removal of broadleaved wood (primarily from native forests) decreased by 9% in 1995–96 to 9.9 million cubic metres, the

removal of coniferous wood (mainly from plantations) rose by 0.5%.

In 1995–96, the value of exports of forest products totalled \$1,018m, of which 53% were woodchips and 24% paper and paperboard products. In the same year, the value of imports of forest products was \$2,897m, of which 58% were paper and paperboard products and 13% sawnwood. This indicates a trade deficit in forest products of \$1,879m in 1995–96. Australia produces 83% of its sawn timber needs, of which native forests provide about 40%, with the balance coming from softwood plantations. Imported sawn timber is mostly Douglas Fir from North America, and Radiata Pine from New Zealand.

The hardwood and softwood sawmilling industries comprise mills of various sizes which process wood into sawn timber and other products such as veneers, mouldings and floorings. The hardwood mills are generally small scale and scattered. The softwood mills are generally of a larger scale and more highly integrated with other wood processing facilities. Australia's production of sawn timber decreased by 7.0% in 1995–96 to 3,427,000 cubic metres (table 16.4), of which 60% was softwood.

Other value added timber products include plywood, wood-based panels and reconstituted wood products. Australian wood based panels include particleboard, medium density fibreboard and hardboard made from softwood or hardwood pulp logs, sawmill residues or thinnings.

Pulp and paper mills use roundwood thinnings, low quality logs, harvesting residues and sawmill waste, and recycled paper and paperboard, to produce a broad range of pulp and paper products. Around a third of domestically consumed paper is imported. The majority of paper products produced domestically are packaging and industrial papers, newsprint, printing and writing papers, and tissue paper. Each requires different inputs and technologies. Recycled paper is now a major source of fibre in the production of paper and paperboard. Its use has increased from about 34% of fibre input in 1989–90 to 49% in 1995–96.

Woodchips are the main source of export earnings for the forestry sector in Australia. In 1995–96 the value of woodchips exported represented 53% of the total value of forest

products exported. Woodchips are mainly used in the production of paper and paper products, and the woodchip export industry uses sawmill residues and timber which is unsuitable for sawmilling and not required by the Australian pulp, paper and reconstituted board industries. Before the advent of the woodchip export industry, much of this material was left in the forest after logging. Considerable quantities of sawmill waste material, which would otherwise be burnt, are also chipped for local pulpwood-using industries and for export. Until recently, at least 95% of woodchips exported from Australia have been eucalypt, but increasing quantities of softwood woodchips are now becoming available from pine plantations. In 1995–96, 24% of the total value of woodchips exported was from softwood woodchips.

### 16.3 SUMMARY OF OPERATIONS FOR WOOD PRODUCT MANUFACTURING ESTABLISHMENTS, 1994–95

|                                                   | Employment<br>at 30 June(a) | Wages and<br>salaries(b) | Turnover        |
|---------------------------------------------------|-----------------------------|--------------------------|-----------------|
|                                                   | '000                        | \$m                      | \$m             |
| Log sawmilling and timber dressing                |                             |                          |                 |
| Log sawmilling                                    | 8.4                         | 207.0                    | 947.6           |
| Wood chipping                                     | 0.8                         | 30.7                     | 468.3           |
| Timber resawing and dressing                      | 6.8                         | 203.0                    | 1 110.2         |
| <i>Total</i>                                      | 16.0                        | 440.6                    | 2 526.1         |
| Other wood product manufacturing                  |                             |                          |                 |
| Plywood and veneer manufacturing                  | 1.6                         | 51.0                     | 246.3           |
| Fabricated wood manufacturing                     | 4.5                         | 164.5                    | 923.0           |
| Wooden structural component manufacturing         | 16.3                        | 376.5                    | 1 771.2         |
| Wood product manufacturing n.e.c.                 | 7.4                         | 153.0                    | 714.7           |
| <i>Total</i>                                      | 29.7                        | 745.0                    | 3 655.2         |
| Paper and paper product manufacturing             |                             |                          |                 |
| Pulp, paper and paperboard manufacturing          | 5.4                         | 249.9                    | 2 219.8         |
| Solid paperboard container manufacturing          | 2.2                         | 86.6                     | 458.7           |
| Corrugated paperboard container manufacturing     | 5.3                         | 257.5                    | 1 441.1         |
| Paper bag and sack manufacturing                  | 0.9                         | 31.4                     | 192.2           |
| Paper product manufacturing n.e.c.                | 3.4                         | 137.2                    | 794.7           |
| <i>Total</i>                                      | 17.3                        | 762.5                    | 5 106.5         |
| <b>Total wood and paper product manufacturing</b> | <b>63.0</b>                 | <b>1 948.1</b>           | <b>11 287.8</b> |

(a) Includes working proprietors. (b) Excludes the drawings of working proprietors.

Source: *Manufacturing Industry, Australia* (8221.0).

**16.4 PRODUCTION OF WOOD AND SELECTED WOOD PRODUCTS**

| Commodity                     | Quantity            | 1992–93 | 1993–94 | 1994–95 | 1995–96p |
|-------------------------------|---------------------|---------|---------|---------|----------|
| Sawn Australian grown timber  |                     |         |         |         |          |
| Coniferous                    | '000 m <sup>3</sup> | 1 660   | 1 898   | 2 121   | 2 044    |
| Broadleaved                   | '000 m <sup>3</sup> | 1 440   | 1 533   | 1 570   | 1 383    |
| Total                         | '000 m <sup>3</sup> | 3 100   | 3 431   | 3 691   | 3 427    |
| Hardwood woodchips(a)         | '000 t              | 4 536   | 4 612   | 5 437   | 4 827    |
| Railway sleepers              | '000 m <sup>3</sup> | 87      | 82      | 84      | 86       |
| Plywood                       | '000 m <sup>3</sup> | 122     | 138     | 145     | 131      |
| Unlaminated particle board(a) | '000 m <sup>3</sup> | 662     | 828     | 864     | 804      |
| Medium density fibreboard     | '000 m <sup>3</sup> | 318     | 421     | 436     | 377      |
| Wood pulp(a)                  | '000 t              | 996     | 996     | 1 009   | 986      |
| Paper and paperboard          |                     |         |         |         |          |
| Newsprint(a)                  | '000 t              | 433     | 426     | 444     | 445      |
| Printing and writing          | '000 t              | 369     | 386     | 365     | 351      |
| Household and sanitary        | '000 t              | 165     | 170     | 173     | 180      |
| Packaging and industrial      | '000 t              | 1 164   | 1 255   | 1 312   | 1 407    |

(a) Excludes production of small single establishment management units with fewer than four persons employed, and establishments engaged in non-manufacturing activities but which may carry on, in a minor way, some manufacturing.

Source: Australian Bureau of Statistics and Australian Bureau of Agricultural and Resource Economics, unpublished data.

## Government administration

Land and forests management is primarily the responsibility of State and Territory Governments. Each State has a forest authority responsible for the management and control of publicly-owned forests, in accordance with the Forestry Acts and Regulations of the State or Territory concerned.

The Department of Primary Industries and Energy (DPIE) and the Department of the Environment (DOTE) are the two key agencies which have responsibilities relating to forests at the national level. Close liaison is maintained between the two agencies on relevant issues. DPIE's main responsibilities are the development of a national approach to forest management; providing advice to the Commonwealth Minister responsible for forest matters; administration of export licensing responsibilities in relation to unprocessed timber; liaison with State, national and international organisations concerned with forestry; provision of a Secretariat for the Ministerial Council on Forestry, Fisheries and Aquaculture (MCFFA); and management of policy and program initiatives.

DOTE has responsibilities for environmental matters relating to forests. DOTE provides policy advice to its Minister and the Government on conservation and environmental matters pertaining to Australia's forests, including biological diversity and climate change. The Australian Heritage Commission and Environment Australia within the Environment

Portfolio have assessment, management and monitoring roles in respect of the national estate, endangered species and environmental impacts in Australia's forests.

DPIE and DOTE, in close cooperation with the States, Territories and Ministerial Councils, were extensively involved in the development of the National Forest Policy Statement and the National Forest Inventory.

The MCFFA consists of Commonwealth State, Territory and New Zealand Ministers responsible for forestry. The Council is chaired jointly by the Commonwealth Minister for Primary Industries and Energy and the Commonwealth Minister for Resources and Energy. MCFFA, the successor of the Australian Forestry Council formed in 1964, works to provide leadership and facilitate cooperation at the national level.

Initiatives fostered by the MCFFA are aimed at promoting the enhanced management of the nation's forest resources in the general interest of the community. Most recently it has been involved in the development and implementation of initiatives under the National Forest Policy Statement in cooperation with the Australian and New Zealand Environment and Conservation Council.

## Commonwealth Government initiatives

### National Forest Policy Statement (NFPS)

The NFPS was signed by the Commonwealth and all mainland State and Territory Governments at the Council of Australian Governments meeting in Perth in December 1992. In 1995 Tasmania also became a signatory.

The Statement provides a policy framework for the future management of Australia's public and private forests and outlines a vision for the ecologically sustainable management of Australia's forests, comprising 11 broad national goals in the following areas:

- Conservation — to maintain an extensive and permanent native forest estate in Australia and to manage that estate in an ecologically sustainable manner so as to conserve all values including biological diversity, heritage and Aboriginal and other cultural values.
- Wood production and industry development — to develop internationally competitive and ecologically sustainable wood production and wood products industries.
- Integrated and coordinated decision making and management — to reduce fragmentation and duplication in the land use decision-making process between the States and the Commonwealth.
- Private native forests — to ensure that private native forests are maintained and managed in an ecologically sustainable manner, as part of the permanent native forest estate.
- Plantations — to expand Australia's commercial plantations of softwoods and hardwoods so as to provide an additional economically viable, reliable and high-quality wood resource for industry and to meet other environmental and economic objectives, in particular the rehabilitation of cleared agricultural land and the improvement of water quality.
- Water supply and catchment management — to ensure the availability of reliable, high-quality water supplies from forested land and to protect catchment values.
- Tourism and other economic and social opportunities — to manage Australia's forests in an ecologically sustainable manner for a range of uses, including tourism, recreation and production of non-wood products.

- Employment, labour force education and training — to expand employment opportunities and the skills base of people working in forest management and forest-based industries.
- Public awareness, education and involvement — to foster community understanding of, and support for, ecologically sustainable forest management.
- Research and development — to increase Australia's national forest research and development effort and to ensure that it is well coordinated, efficiently undertaken and effectively applied.
- International responsibilities — to promote nature conservation and sustainable use of forests outside Australia and to ensure that Australia fulfils its obligations under relevant international agreements.

### Plantation initiatives under the NFPS

In 1993, under the NFPS, the Commonwealth established two plantations initiatives: the Farm Forestry Program (FFP) and the Community Rainforest Reafforestation Program (CRRP). The CRRP is a joint initiative, sponsored by the Commonwealth government and State and local governments.

Commonwealth funding of the CRRP and FFP has continued since 1992 under the Wood and Paper Industry Strategy. From 1997–98, further funding for the Farm Forestry Program has been provided under the Natural Heritage Trust.

### Farm forestry

The FFP aims to promote commercial wood production on cleared agricultural land so as to provide an additional reliable, high-quality wood resource for sustainable regional industries, as well as to diversify farm incomes. The FFP also promotes tree-planting for the production of non-wood products with an emphasis on developing commercial uses of native species, while addressing problems of land degradation. A total of \$36.5m is available from the Natural Heritage Trust for farm forestry, of which \$3.1m is available in 1997–98.

### Regional Forest Agreements

Australia's National Forest Policy sets out broad conservation and industry goals for the management of Australia's forests agreed between the Commonwealth Government and the State and Territory Governments.



To implement this national policy, governments have opted for an approach which involves:

- providing interim protection to forest areas which may be required for a Comprehensive, Adequate and Representative (CAR) forest reserve system;
- undertaking Comprehensive Regional Assessments (CRA) of environmental, heritage, economic and social values of forests; and
- negotiating Regional Forest Agreements (RFA) between the Commonwealth Government and the State Governments about the long-term management and use of forests in a particular region.

Governments have agreed to a framework and process for carrying out comprehensive assessments of the economic, social, environmental and heritage values of forest regions.

In 1996 the Government allocated an additional \$48m over three years to accelerate the completion of the CRA process.

Once completed, CRAs will provide Governments with the information required to make long term decisions about forest use and sustainable management.

RFAs will provide a blueprint for the future management of our forests, and the basis for an internationally competitive and ecologically sustainable forest products industry.

The first RFA was signed between the Commonwealth Government and the Victorian Government for the East Gippsland region in February 1997. The RFA for Tasmania was signed late 1997, while the RFA for Central Highlands (NSW) will be signed early 1998.

Regional Forest Agreements for Eden (NSW), Upper North East (NSW), North East (Victoria), Western Australia and South East Queensland are scheduled to be completed in 1998.

### **Wood and Paper Industry Strategy**

The Commonwealth outlined new initiatives to underpin development of the wood and paper industry in the Wood and Paper Industry Strategy (WAPIS) released in December 1995. The strategy is intended to build upon the Regional Forest Agreement process, and aims to facilitate a positive environment for investment in downstream processing based on resources

from sustainably managed native forests and plantations. The WAPIS is complemented by the Forest Industry Structural Adjustment program.

The WAPIS provides support to enhance the development of a farm forestry resource, activities to underpin forestry growing and processing, and industry research and development, including criteria and indicators for sustainable forest management.

The strategy seeks to include specific measures to enhance the development of a viable, value adding forests products industry by removing impediments and disincentives to reinvestment.

In the 1996–97 Federal Budget, \$32m was allocated to the Wood and Paper Industry Strategy over the four years 1996–97 to 1999–2000.

### **Forestry Industry Structural Adjustment Package**

The 1996–97 Federal Budget allocated \$98.6m to the Forestry Industry Structural Adjustment Package (FISAP) to assist businesses and workers involved in native forest industries to adjust to changes as a result of the Interim/Deferred Forest Agreements and Regional Forest Agreements. From this allocation, \$60m has been committed to industry restructuring in New South Wales, and is matched by an additional \$60m contribution from the New South Wales Government. Arrangements in other States will be determined on the basis of need following discussions with the relevant State authorities. At 30 June 1997, about \$10m of Commonwealth funds had been spent on FISAP, of which over \$8m was spent in New South Wales.

### **National Forests Inventory**

In many of the debates over forest management, the information base on forest attributes, such as timber, fauna and flora, has been found to be incomplete. Accordingly, in late 1988 the Commonwealth Government initiated a National Forest Inventory (NFI). A State of the Forests Report (SOFR) is being prepared by the NFI (due for release in early 1998), which will include a description of the resource, forest use and management, and an examination of the social forces framing public opinion.

### **National Plantations Inventory**

The need for a National Plantations Inventory (NPI) was highlighted in the Wood and Paper

Industry Strategy. The purpose of the NPI is to describe in detail Australia's plantation resource in terms of location, species, planting date, and forecast regional and national wood flows. The comprehensive information base, used to produce the first report of the NPI in 1997, leads to more informed discussion and decision making about the future of Australia's forest industry.

### **Tropical timber**

In June 1992 the Commonwealth Government announced its International Tropical Forest Conservation and Sustainable Land Use Policy. A key aspect of the policy is a commitment to the year 2000 target set by the International Tropical Timber Organisation (ITTO), by which date all tropical timber products entering international trade should be derived from sustainably managed forests.

Other aspects of the policy include support for the conservation of biodiversity, reforestation through agroforestry and plantations, and the provision of technical and scientific assistance to other countries, largely in the Asia-Pacific region, to promote better forest management practices. These policy measures complement initiatives arising from the Rio Earth Summit including the Conventions on Climate Change and Biodiversity, Agenda 21 and The Statement of Principles on Forests.

### **Pulp mill guidelines**

In December 1989 the Commonwealth established environmental guidelines for the development of new bleached eucalypt kraft pulp mills. To ensure the effective implementation of the Commonwealth guidelines and to streamline approval processes, the Commonwealth concluded agreements with Tasmania, Western Australia and Victoria.

To ensure that the Commonwealth guidelines remain current with international developments in pulping and bleaching technologies, the Government also announced in December 1989 the establishment of a National Pulp Mills Research Program (NPMRP). The NPMRP is a cooperative venture involving the Commonwealth Government and State Governments, community interest groups, industry and the Commonwealth Scientific and Industrial Research Organisation (CSIRO). The Program's principal objectives are the expansion of basic knowledge in pulping of eucalypt woods and bleaching of the pulps; improving the currently available technology; and developing

more relevant and superior biological monitoring systems for the receiving waters.

The Commonwealth has released a set of guidelines based on recent international research under the Pulp and Paper Research Program and recent international developments in the wood pulping industry.

### **Forest and Wood Products Research and Development Corporation**

The Forest and Wood Products Research and Development Corporation was established in 1994 as a key initiative under the National Forest Policy Statement to assist the forest industries to improve their international competitiveness and to realise their growth potential. The Corporation has structured its work around four key research programs:

- sustainability and environmental management;
- better structural/building systems;
- process and new product development; and
- plantation and regrowth timber — from forest to market.

The Corporation is jointly funded by industry and the Commonwealth.

### **CSIRO**

CSIRO organises its research in industry sectors. Research on production forestry and forest products takes place in the Forestry, Wood and Paper Industries Sector. The emphasis is on strategic research concerned with sustainable commercial production and processing of wood from native eucalypt forests and plantations of eucalypts and softwoods.

Much of CSIRO's work in this sector takes place at CSIRO Forestry and Forest Products, which has its headquarters and main laboratory in Canberra, a forest products laboratory at Clayton, Victoria with other laboratories in Hobart, Tasmania; Mount Gambier, South Australia; and Perth, Western Australia. Part of the Cooperative Research Centre for Sustainable Forest Management is co-located with the Division on the campus of the University of Tasmania. The Cooperative Research Centre for Hardwood Fibre and Paper Science operates from the CSIRO-Monash University site at Clayton. Other Divisions of CSIRO which contribute to the sector are the Divisions of Entomology, Land and Water, Plant Industry and Wildlife and Ecology.

CSIRO Divisions of Wildlife and Ecology and Plant Industry undertake studies of rainforest ecology from the Tropical Forest Research Centre at Atherton, Queensland.

Research undertaken by CSIRO Forestry and Forest Products is closely aligned to major forest resources and industries: softwood plantations, hardwood plantations, native forests, solid wood processing and production, wood protection, wood composites, and pulp and paper. Important disciplines are tree physiology, nutrition, genetics, chemistry, wood science and engineering. Major projects include genetic improvement, regrowth forest management, later age stand management in softwood plantations, irrigation forestry, processing small hardwood logs, development of wood preservatives and improved pulping technologies.

Sustained high value production has long been a major goal of forest managers and researchers. Australia has endorsed the criteria and indicators for the sustainable management of native forests developed through the Montreal Process (see below). The National Forest Policy Statement and the Wood and Paper Industry Strategy provide the framework for cooperative national action on this issue. The Division is actively involved in research for defining and monitoring ecologically sustainable forest management.

### **First Approximation Report of the 'Montreal Process' Working Group**

Australia has prepared its contribution to the First Approximation Report of the Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests (the 'Montreal Process' Working Group).

This is the first time Australia has attempted to report against the seven criteria and 67 indicators of sustainable forest management agreed by the Montreal Process Working Group in 1995. However, the report was produced as much to be a test of the availability of data and the relevance of the criteria as a description of the state of Australian forests. The report used only available data, but provides valuable input for setting priorities to improve data collection against indicators for future Montreal Process reports. In short, the report has been produced to evaluate the Montreal Process criteria and indicators in Australian conditions.

Australia's first State of the Forests Report, together with information from Commonwealth, State and Territory agencies, provided the data for this report. The State of the Forests Report will provide a more detailed and comprehensive review of Australia's forest resources and how they are being managed. Future national reports on Australia's forests will include reporting against criteria and indicators to assess our success in achieving the goal of sustainable forest management.

The First Approximation Report found that there is also a need for further work to establish the connection between some of the indicators and sustainability, and to establish a baseline against which trends in some indicators can be assessed. The experience gained in preparing this report has provided a good starting point for review of some indicators.

The Montreal Process First Approximation Report has been compiled from individual country reports and was released at the Eleventh World Forestry Congress in Turkey in October 1997.

### **Framework of regional criteria and indicators**

The Commonwealth Government and the State Governments, with input from other stakeholders, have developed a framework of regional criteria and indicators for assessing sustainable forest management in the Regional Forest Agreement (RFA) process. The framework is based on the internationally agreed Montreal Process criteria and indicators. A national conference and a series of expert/technical workshops provided input into the development of the framework.

The framework of regional criteria and indicators will provide:

- a basis for assessing progress towards the achievement of sustainable forest management at a regional (sub-national) scale;
- information in terms of a scale which can be aggregated to a national level in a transparent and credible way for reporting against the Montreal Process criteria and indicators; and
- direction to the RFA process concerning data collection and reporting with respect to sustainable forest management.

The framework is also relevant to areas outside the RFA process. The development and use of

indicators will be an evolving process that will be reviewed and adjusted as appropriate to reflect new research findings, advances in technology, changes in community values and developments in sustainable forest management practices.

## Fishing

### Fisheries resources

This section covers Australia's fisheries resources and activities relating to their protection and use.

Australia's fisheries stocks are extremely diverse but, by world standards, its marine ecosystem is relatively unproductive. The Australian Fishing Zone (AFZ) covers an area 16% larger than the Australian land mass and is the third largest fishing zone in the world. However, Australia's fish production is insignificant by world standards. This reflects low productivity of the oceans rather than under-exploitation of the resource. However, while some species are currently considered to be overharvested, some fish resources such as albacore and southern whiting are not being used optimally.

Over 3,000 species of marine and freshwater fish and at least an equal number of crustacean and mollusc species occur in and around Australia. Less than 100 of these are commercially exploited. Australia's major commercially exploited species are prawns, rock lobster, abalone, tuna, other fin fish, scallops, edible and pearl oysters. Australian fishing operators concentrate their efforts on estuarine, coastal, pelagic (surface) species and demersal (bottom living) species that occur on the continental shelf.

In 1993–94, Australians consumed 3.5 kg in edible weight of fresh and frozen fish per person, sourced from Australian waters, and 2.1 kg of imported fish. The consumption per person of crustaceans and molluscs (such as prawns, lobsters, crabs and oysters) was 1.5 kg. A further 3.1 kg per person were consumed in the form of prepared seafood products.

The level of fishing activity has increased rapidly over the last decade to the point where almost

all the major known fish, crustacean and mollusc resources are fully exploited. Some major fisheries such as southern bluefin tuna, gemfish and shark have suffered serious biological depletion.

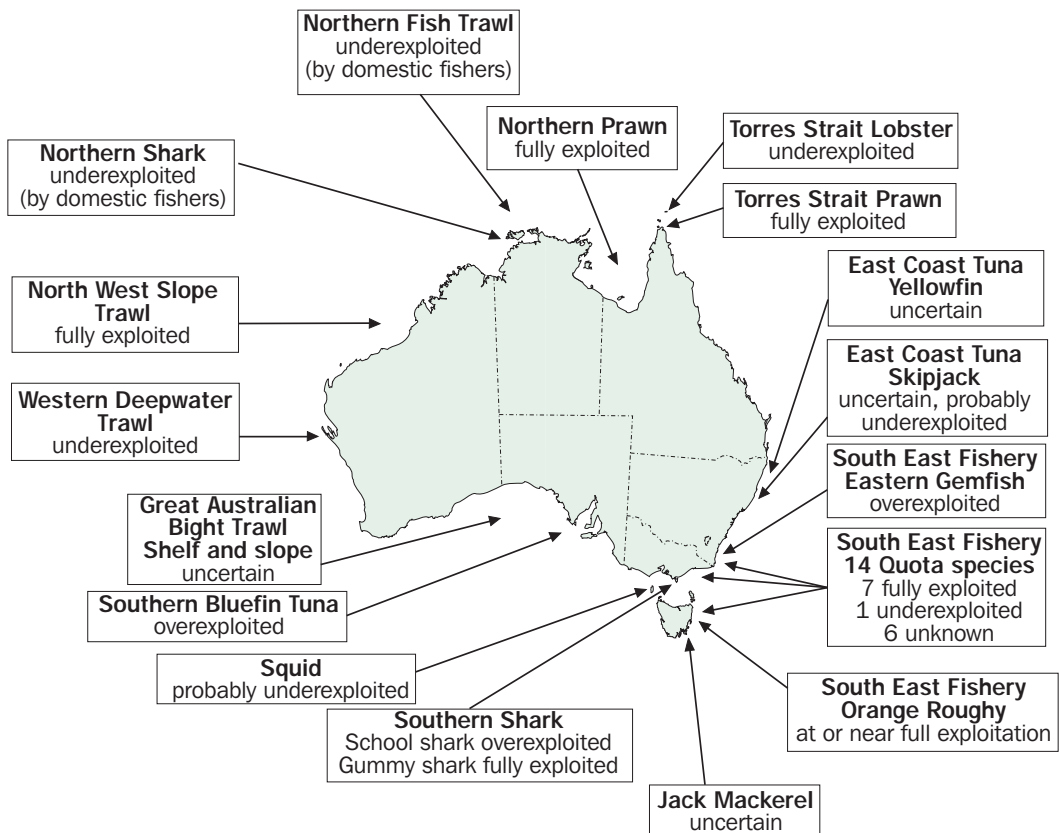
Australia has enjoyed a relatively long history of success in the farming of the Sydney rock oyster. Pearl culture operations and ornamental fish farming are well established. The production of juveniles of several species of fin fish, molluscs and crustaceans has been undertaken for some years, initially for restocking wild populations and subsequently for grow-out operations. As in many other developed countries, there has been a surge of interest and investment in many types of aquatic farms over the last decade. Notable successes are the salmon industry in Tasmania and commercial cultivation of the Pacific oyster, blue mussel and rainbow trout.

Aquaculture, or 'fish farming', is an alternative to harvesting the naturally occurring fish stocks and has considerable potential as a means of ensuring sustainability of harvesting yields. Aquaculture industries are established in all States, with species involved ranging from pearl oysters to freshwater trout. Aquaculture has experienced rapid growth during the past six years, with the value of production rising from \$188m in 1989–90 to \$338m in 1995–96.

Developmental work is taking place in a number of areas including barramundi, freshwater crayfish (yabbies and marron), prawns, mussels and algae. Research is continuing into the hatchery rearing of species such as abalone, scallops, giant clams, and flat and pearl oysters. Over half by value of the established aquaculture output goes to markets other than for direct consumption. However, the output of the newer emerging industries goes mainly to markets for direct consumption.

In March 1994 the Commonwealth Government released the National Strategy on Aquaculture in Australia. The development of the Strategy was a cooperative process, involving government at the national and State/Territory levels, as well as industry, recreational fishers, environmental groups and other interested parties.

## 16.5 STATUS OF COMMERCIAL OR JOINTLY MANAGED FISHERIES RESOURCES



Source: Bureau of Resource Sciences 1995.

The Strategy aimed to provide a national framework for planning the sustainable growth and development of aquaculture at the State/Territory, regional and enterprise levels.

In June 1997 an Implementation Review was completed which acknowledged the progress that had been made in implementing specific goals of the Strategy and highlighted those areas that still require action.

The status of Australia's Commonwealth or jointly managed fisheries resources is summarised in map 16.5.

## Production, processing, and exports and imports of fisheries products

### Value of fisheries production

Table 16.6 shows the quantity and table 16.7 the gross value of the production of the Australian commercial fishing industry. Australian fisheries production covers total production from both Commonwealth and State managed fisheries and from aquaculture. Gross value of production is the value placed on recorded production at the wholesale price realised in the principal markets.

In general, the principal markets are the metropolitan markets in each State. However, in cases where commodities are consumed locally or where they become raw material for a secondary industry, these points are treated as the principal markets. (As the value of materials used in the course of production is not available, it is not possible to show net values.)

The gross value of Australian fisheries production fell by 10% in 1995–96, to \$1.63 billion (table 16.8). Almost two-thirds of the \$180 million fall in value was accounted for by two commodities; rock lobster (down \$81m) and tuna (down \$34m) (table 16.9), the latter despite a 1.8% increase in the volume of production (table 16.10). The 10% decline

contrasts with an 8% increase in the previous year.

Commonwealth fisheries are those managed for the Commonwealth Government by the Australian Fisheries Management Authority. State Governments manage inland fisheries and aquaculture in addition to those salt water fisheries not managed by the Commonwealth. The distribution of the management of fisheries between the Commonwealth and the States is determined following consultations held under the Offshore Constitutional Settlement Agreement.

Commonwealth fisheries accounted for 19% of the total value of Australian fisheries production in 1995–96 (table 16.7).

#### 16.6 AUSTRALIAN FISHERIES PRODUCTION, By State(a) — 1995–96

|                       | NSW           | Vic.          | Qld           | SA            | WA            | Tas.          | NT           | C'wealth(b)   | Aust.             |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|---------------|-------------------|
|                       | tonnes        | tonnes        | tonnes        | tonnes        | tonnes        | tonnes        | tonnes       | tonnes        | tonnes            |
| <b>Fish</b>           |               |               |               |               |               |               |              |               |                   |
| Tuna                  | —             | —             | —             | 2 013         | 37            | —             | 16           | (c)10 364     | (d)9 780          |
| Other                 | 14 211        | 7 990         | 10 483        | 7 307         | 25 902        | 18 034        | 2 509        | (e)31 532     | 117 968           |
| <b>Total</b>          | <b>14 211</b> | <b>7 990</b>  | <b>10 483</b> | <b>9 320</b>  | <b>25 939</b> | <b>18 034</b> | <b>2 525</b> | <b>41 896</b> | <b>127 748</b>    |
| <b>Crustaceans</b>    |               |               |               |               |               |               |              |               |                   |
| Prawns                | 1 981         | 13            | 8 663         | 2 271         | 3 800         | —             | n.a.         | (f)10 807     | 27 536            |
| Rock lobster          | 99            | 480           | 590           | 2 587         | 9 911         | 1 756         | —            | 180           | 15 609            |
| Other                 | 944           | 109           | 4 201         | 749           | 1 024         | 142           | 235          | 29            | 7 433             |
| <b>Total</b>          | <b>3 024</b>  | <b>602</b>    | <b>13 455</b> | <b>5 607</b>  | <b>14 735</b> | <b>1 898</b>  | <b>235</b>   | <b>11 016</b> | <b>50 577</b>     |
| <b>Molluscs</b>       |               |               |               |               |               |               |              |               |                   |
| Abalone               | 344           | 1 521         | —             | 902           | 346           | 2 128         | —            | —             | 5 241             |
| Scallops              | 4             | 2 620         | 4 495         | —             | 3 510         | —             | 9            | 3 431         | 14 069            |
| Oysters               | (g)5 326      | 5             | 161           | 976           | —             | 3 800         | —            | —             | 10 267            |
| Other                 | 1 290         | 305           | 118           | 1 233         | 624           | 350           | 140          | (h)2 243      | 6 303             |
| <b>Total</b>          | <b>6 964</b>  | <b>4 451</b>  | <b>4 774</b>  | <b>3 111</b>  | <b>4 480</b>  | <b>6 278</b>  | <b>149</b>   | <b>5 674</b>  | <b>35 880</b>     |
| <b>Total quantity</b> | <b>24 199</b> | <b>13 043</b> | <b>28 712</b> | <b>18 038</b> | <b>45 153</b> | <b>26 210</b> | <b>2 909</b> | <b>58 592</b> | <b>(d)214 205</b> |

(a) State totals include estimates of aquaculture production but exclude hatchery and inland commercial fishery production.

(b) Total includes all fisheries under federal jurisdiction. (c) Includes the southern bluefin, east coast and purse seine tuna fisheries.

(d) Total has been adjusted to allow for southern bluefin tuna caught in the Commonwealth southern bluefin tuna fishery, as an input to farms in South Australia. (e) Includes the fish component of the south east trawl, south east non-trawl, Great Australian Bight, southern shark and Torres Strait fisheries. (f) Includes the northern prawn, Torres Strait, south east and other fisheries.

(g) Assumed to be unchanged from previous year. (h) Includes squid, octopus and cuttlefish from the south east and Great Australian Bight fisheries, and pearl oyster from the Torres Strait fishery.

Source: Australian Bureau of Agricultural and Resource Economics and the Australian Fisheries Service.



**16.7 VALUE OF AUSTRALIAN FISHERIES PRODUCTION, By State(a) — 1995–96**

|                    | NSW            | Vic.          | Qld            | SA             | WA             | Tas.           | NT            | C'wealth(b)    | Aust.               |
|--------------------|----------------|---------------|----------------|----------------|----------------|----------------|---------------|----------------|---------------------|
|                    | \$'000         | \$'000        | \$'000         | \$'000         | \$'000         | \$'000         | \$'000        | \$'000         | \$'000              |
| <b>Fish</b>        |                |               |                |                |                |                |               |                |                     |
| Tuna               | —              | —             | —              | 39 924         | 97             | —              | 82            | (c)68 463      | (d)95 316           |
| Other              | 38 207         | 20 150        | 56 446         | 18 592         | 46 827         | 64 101         | 9 459         | (e)74 861      | 328 643             |
| <b>Total</b>       | <b>38 207</b>  | <b>20 150</b> | <b>56 446</b>  | <b>58 516</b>  | <b>46 924</b>  | <b>64 101</b>  | <b>9 541</b>  | <b>143 325</b> | <b>423 959</b>      |
| <b>Crustaceans</b> |                |               |                |                |                |                |               |                |                     |
| Prawns             | 21 005         | 75            | 113 391        | 26 324         | 49 848         | —              | n.a.          | (f)135 667     | 346 309             |
| Rock lobster       | 3 526          | 13 990        | 5 311          | 68 399         | 225 715        | 46 800         | —             | 5 766          | 369 508             |
| Other              | 6 459          | 890           | 28 905         | 3 264          | 5 509          | 461            | 2 799         | 207            | 48 494              |
| <b>Total</b>       | <b>30 990</b>  | <b>14 880</b> | <b>147 607</b> | <b>97 987</b>  | <b>281 072</b> | <b>47 261</b>  | <b>2 799</b>  | <b>141 639</b> | <b>764 310</b>      |
| <b>Molluscs</b>    |                |               |                |                |                |                |               |                |                     |
| Abalone            | 11 185         | 37 361        | —              | 22 474         | 10 670         | 48 713         | —             | —              | 130 403             |
| Scallops           | 8              | 5 240         | 23 240         | —              | 20 009         | —              | 26            | 14 034         | 62 557              |
| Oysters            | (g)28 388      | 18            | 674            | 3 950          | —              | 19 000         | —             | —              | 52 030              |
| Other              | 4 021          | 1 061         | 332            | 3 159          | 136 833        | 1 225          | 48 013        | (h)4 890       | 199 533             |
| <b>Total</b>       | <b>43 601</b>  | <b>43 679</b> | <b>24 246</b>  | <b>29 583</b>  | <b>167 512</b> | <b>68 938</b>  | <b>48 039</b> | <b>18 924</b>  | <b>444 523</b>      |
| <b>Total value</b> | <b>112 798</b> | <b>78 785</b> | <b>228 299</b> | <b>186 086</b> | <b>495 508</b> | <b>180 300</b> | <b>60 379</b> | <b>303 888</b> | <b>(d)1 632 792</b> |

(a) State totals include estimates of aquaculture production but exclude hatchery and inland commercial fishery production.

(b) Total includes all fisheries under federal jurisdiction. (c) Includes the southern bluefin, east coast and purse seine tuna fisheries.

(d) Total has been adjusted to allow for southern bluefin tuna caught in the Commonwealth southern bluefin tuna fishery, as an input to farms in South Australia. (e) Includes the fish component of the south east trawl, south east non-trawl, Great Australian Bight, southern shark and Torres Strait fisheries. (f) Includes the northern prawn, Torres Strait, south east and other fisheries.

(g) Assumed to be unchanged from previous year. (h) Includes squid, octopus and cuttlefish from the south east and Great Australian Bight fisheries, and pearl oyster from the Torres Strait fishery.

Source: Australian Bureau of Agricultural and Resource Economics and the Australian Fisheries Service.

**16.8 GROSS VALUE OF FISHERIES PRODUCTION**

|         | Value |
|---------|-------|
|         | \$m   |
| 1977–78 | 233   |
| 1978–79 | 279   |
| 1979–80 | 326   |
| 1980–81 | 330   |
| 1981–82 | 344   |
| 1982–83 | 423   |
| 1983–84 | 449   |
| 1984–85 | 522   |
| 1985–86 | 635   |
| 1986–87 | 702   |
| 1987–88 | 828   |
| 1988–89 | 1 022 |
| 1989–90 | 1 092 |
| 1990–91 | 1 223 |
| 1991–92 | 1 376 |
| 1992–93 | 1 493 |
| 1993–94 | 1 679 |
| 1994–95 | 1 813 |
| 1995–96 | 1 633 |

Source: Australian Bureau of Agricultural and Resource Economics and the Australian Fisheries Service.

**16.9 GROSS VALUE OF SELECTED MAJOR FISHERIES CATEGORIES**

|                | 1993–94      | 1994–95      | 1995–96p     |
|----------------|--------------|--------------|--------------|
|                | \$m          | \$m          | \$m          |
| Prawns         | 321          | 368          | 346          |
| Rock lobster   | 430          | 451          | 370          |
| Tuna           | 108          | 130          | 95           |
| Other fin fish | 323          | 336          | 329          |
| Abalone        | 178          | 145          | 130          |
| Scallops       | 72           | 64           | 63           |
| Oysters        | 42           | 48           | 52           |
| Pearls         | 94           | 153          | 131          |
| Other(a)       | 112          | 119          | 117          |
| <b>Total</b>   | <b>1 679</b> | <b>1 813</b> | <b>1 633</b> |

(a) Other fisheries production not elsewhere included.

Source: Australian Bureau of Agricultural and Resource Economics.

The value of Australian aquaculture production also declined in 1995–96, by \$7.4 million (2%) (table 16.11). Aquaculture accounted for 21% of the total value of Australian fisheries production in 1995–96, up slightly from its share of 19% in the previous year. The decline in the value of aquaculture production was caused predominantly by a \$21.7 million (14%) fall in the value of pearl oyster production. This was partly offset by increases for other commodities, most notably edible oysters (up \$4.4m or 9%), farmed prawns (up \$3.8m or 13%), salmon (up \$2.8m or 5%) and tuna (up \$2.0m or 5%).

#### 16.10 AUSTRALIAN FISHERIES PRODUCTION, By Category(a)

|                    | 1993–94        | 1994–95p       | 1995–96p       |
|--------------------|----------------|----------------|----------------|
|                    | tonnes         | tonnes         | tonnes         |
| <b>Fish</b>        |                |                |                |
| Tuna               | 7 703          | 8 681          | 9 780          |
| Other              | 121 870        | 127 489        | 117 968        |
| <b>Total</b>       | <b>129 573</b> | <b>136 170</b> | <b>127 748</b> |
| <b>Crustaceans</b> |                |                |                |
| Prawns             | 23 170         | 27 966         | 27 536         |
| Rock lobster       | 16 793         | 16 282         | 15 609         |
| Other              | 7 322          | 7 871          | 7 433          |
| <b>Total</b>       | <b>47 284</b>  | <b>52 119</b>  | <b>50 577</b>  |
| <b>Molluscs</b>    |                |                |                |
| Abalone            | 4 673          | 5 204          | 5 241          |
| Scallops           | 23 606         | 15 415         | 14 069         |
| Oysters            | 8 717          | 9 344          | 10 267         |
| Other              | 5 148          | 7 464          | 6 303          |
| <b>Total</b>       | <b>42 144</b>  | <b>37 427</b>  | <b>35 880</b>  |
| <b>Total</b>       | <b>219 001</b> | <b>225 716</b> | <b>214 205</b> |

(a) Includes an estimated value for aquaculture production but excludes production from inland commercial fisheries.

Source: Australian Bureau of Agricultural and Resource Economics.

Table 16.12 shows the volume of Australian aquaculture production for the three years 1993–94 to 1995–96. During this period, production increased 28% to 25,457 tonnes, a rise of 6% over the 1994–95 level. Edible oysters recorded the most aquaculture production in 1995–96 with 10,267 tonnes (up 10%) while 7,647 tonnes of salmon were produced, 5% more than the 1994–95 level and 62% more than in 1993–94.

#### 16.11 GROSS VALUE OF AQUACULTURE PRODUCTION(a)

|                    | 1993–94      | 1994–95p     | 1995–96p     |
|--------------------|--------------|--------------|--------------|
|                    | \$m          | \$m          | \$m          |
| <b>Fish</b>        |              |              |              |
| Salmon             | 48.0         | 55.7         | 58.5         |
| Tuna               | 24.2         | 38.0         | 39.9         |
| Trout              | 8.4          | 8.1          | 8.8          |
| Other(b)           | 5.8          | 7.3          | 8.7          |
| <b>Total</b>       | <b>86.4</b>  | <b>109.2</b> | <b>115.9</b> |
| <b>Crustaceans</b> |              |              |              |
| Prawn              | 25.8         | 28.4         | 32.2         |
| Other(c)           | 4.5          | 4.6          | 3.9          |
| <b>Total</b>       | <b>30.4</b>  | <b>33.0</b>  | <b>36.1</b>  |
| <b>Molluscs</b>    |              |              |              |
| Pearl oysters      | 94.0         | 153.0        | 131.3        |
| Edible oysters     | 42.4         | 47.6         | 52.0         |
| Other(d)           | 2.7          | 2.6          | 2.8          |
| <b>Total</b>       | <b>139.1</b> | <b>203.2</b> | <b>186.2</b> |
| <b>Total</b>       | <b>255.9</b> | <b>345.5</b> | <b>338.1</b> |

(a) Excludes aquarium fish, hatcheries production, crocodiles, microalgae, and aquarium worms. (b) Includes eels and other native fish. (c) Includes crabs and brine shrimp. (d) Includes mussels, scallops and giant clams.

Source: Australian Bureau of Agricultural and Resource Economics.

#### 16.12 AUSTRALIAN AQUACULTURE PRODUCTION

|                    | 1993–94       | 1994–95p      | 1995–96p      |
|--------------------|---------------|---------------|---------------|
|                    | tonnes        | tonnes        | tonnes        |
| <b>Fish</b>        |               |               |               |
| Salmon             | 4 706         | 7 285         | 7 647         |
| Trout              | 1 819         | 1 779         | 1 899         |
| Tuna               | 1 275         | 1 927         | 2 013         |
| Other              | 583           | 742           | 844           |
| <b>Total(a)</b>    | <b>8 383</b>  | <b>11 733</b> | <b>12 403</b> |
| <b>Crustaceans</b> |               |               |               |
| Prawn              | 1 539         | 1 673         | 1 628         |
| Yabbies            | 336           | 257           | 161           |
| Marron             | 21            | 22            | 32            |
| Other              | 38            | 66            | 60            |
| <b>Total(b)</b>    | <b>1 935</b>  | <b>2 018</b>  | <b>1 881</b>  |
| <b>Molluscs</b>    |               |               |               |
| Edible oysters     | 8 717         | 9 344         | 10 267        |
| Pearl oysters      | —             | —             | —             |
| Other              | 823           | 832           | 907           |
| <b>Total(c)</b>    | <b>9 540</b>  | <b>10 176</b> | <b>11 173</b> |
| <b>Total</b>       | <b>19 858</b> | <b>23 927</b> | <b>25 457</b> |

(a) Includes eels and other native fish. (b) Includes crabs and brine shrimp. (c) Includes mussels, scallops and giant clams.

Source: Australian Bureau of Agricultural and Resource Economics.



## Processing of fish, crustaceans and molluscs

There is very little value added processing of fish products in Australia. Processing establishments vary in size, scope of operations and sophistication of technologies employed. The majority of establishments undertake only the most basic cleaning, filleting, chilling, freezing and packaging processes, but some have the capacity for significant product transformation. Much of the value that is added to the catch is due to correct handling and quick delivery by air to local or overseas markets.

Fish, crustaceans and molluscs intended for export are processed in establishments registered under the Export (Fish) Regulations. Edible fish for local consumption are mainly sent fresh-chilled to markets.

## Exports and imports

Exports of fisheries products come under Commonwealth jurisdiction, while domestic market activity is the responsibility of the States and Territories.

A significant proportion of Australian fisheries production (edible and non-edible) is exported. In 1995–96 the value of exports was \$1.30 billion (table 16.13), about 80% of the total value of Australian production. The 4% decline in the

value of exports compared to 1994–95 is largely attributable to falls in rock lobster, abalone, pearls, fish fillets and prawn exports. Rock lobster remains Australia's highest value fisheries export, accounting for 32% of the total of 1995–96. However, the value of rock lobster exports fell by an estimated 12% to \$416 million. Prawns continued to be the next largest export at \$223 million, despite a 3% fall in value compared with 1994–95 exports. Pearl exports, the third largest earner at \$196 million, fell by an estimated 7%.

Japan continues to be the major destination for Australian exports of fisheries products, accounting for 37% of the total value in 1995–96. Despite a 13% increase in the volume of edible seafood exports to Japan, this represents a 4% decrease in value. With little change in yen denominated prices of Japanese imports, the decline in the value of the yen relative to the Australian dollar was a key reason for the overall decline in export values over the year.

In 1995–96, exports of fisheries products to China were valued at \$21 million, which was more than three times the level of the previous year and ten times the value in 1993–94. Western Australia continues to be the major seafood exporting State (accounting for 33% of the total value in 1995–96), despite an 11% reduction in export values to \$364 million.

**16.13 DESTINATION OF EXPORTS OF AUSTRALIAN FISHERIES PRODUCTS(a)**

| Country      | 1993–94      |              | 1994–95      |              | 1995–96p     |              |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|              | \$m          | %            | \$m          | %            | \$m          | %            |
| Japan        | 551          | 44.5         | 556          | 41.0         | 483          | 37.1         |
| Hong Kong    | 232          | 18.8         | 269          | 19.8         | 234          | 17.9         |
| Taiwan       | 220          | 17.8         | 203          | 15.0         | 219          | 16.8         |
| USA          | 111          | 9.0          | 74           | 5.4          | 64           | 4.9          |
| Singapore    | 39           | 3.1          | 41           | 3.0          | 45           | 3.5          |
| China        | 2            | 0.2          | 6            | 0.4          | 21           | 1.6          |
| Spain        | 6            | 0.5          | 14           | 1.0          | 15           | 1.2          |
| France       | 19           | 1.5          | 13           | 1.0          | 13           | 1.0          |
| Thailand     | 9            | 0.7          | 13           | 1.0          | 13           | 1.0          |
| South Korea  | 10           | 0.8          | 10           | 0.7          | 13           | 1.0          |
| New Zealand  | 6            | 0.5          | 8            | 0.6          | 11           | 0.8          |
| Switzerland  | 6            | 0.5          | 7            | 0.5          | 8            | 0.6          |
| Germany      | 6            | 0.5          | 4            | 0.3          | 6            | 0.4          |
| Other        | 21           | 1.8          | 140          | 10.3         | 159          | 12.2         |
| <b>Total</b> | <b>1 237</b> | <b>100.0</b> | <b>1 358</b> | <b>100.0</b> | <b>1 303</b> | <b>100.0</b> |

(a) Includes non-edible products e.g. marine fats and oils, fish meal, pearls and ornamental fish.

Source: *International Trade database*.

The total value of Australian imports of fisheries products increased marginally in 1995–96, to an estimated \$670 million (table 16.14). Australia remains a net exporter of fisheries products, given exports valued at an estimated \$1.30 billion in 1995–96. Prawns continue to be the main product imported, accounting for 23% of the total. However, the value of prawn

imports fell by 7% compared to 1994–95 imports. The second largest imported item was canned fish, which represented 19% of the total value of imports of fisheries products. The main countries of origin of these imports in 1995–96 were Thailand (26% of total import value), New Zealand (18%) and the United States of America (6%).

**16.14 SOURCE OF AUSTRALIAN IMPORTS OF FISHERIES PRODUCTS(a)**

| Country        | 1993–94    |              | 1994–95    |              | 1995–96p   |              |
|----------------|------------|--------------|------------|--------------|------------|--------------|
|                | \$m        | %            | \$m        | %            | \$m        | %            |
| Thailand       | 131        | 22.1         | 166        | 25.0         | 171        | 25.5         |
| New Zealand    | 104        | 17.5         | 117        | 17.6         | 120        | 17.9         |
| USA            | 31         | 5.3          | 48         | 7.2          | 40         | 5.9          |
| Malaysia       | 39         | 6.6          | 38         | 5.8          | 31         | 4.6          |
| Canada         | 25         | 4.2          | 24         | 3.6          | 30         | 4.4          |
| Japan          | 22         | 3.8          | 20         | 3.0          | 21         | 3.1          |
| Chile          | 15         | 2.6          | 14         | 2.1          | 18         | 2.7          |
| Taiwan         | 11         | 1.8          | 13         | 1.9          | 17         | 2.6          |
| Singapore      | 14         | 2.4          | 13         | 2.0          | 14         | 2.1          |
| Cayman Islands | 12         | 2.1          | 13         | 2.0          | 13         | 2.0          |
| China          | 6          | 1.1          | 10         | 1.5          | 13         | 1.9          |
| South Africa   | 8          | 1.3          | 12         | 1.9          | 12         | 1.8          |
| Denmark        | 7          | 1.1          | 9          | 1.4          | 9          | 1.4          |
| Peru           | 26         | 4.4          | 21         | 3.2          | 9          | 1.3          |
| Indonesia      | 7          | 1.2          | 9          | 1.4          | 8          | 1.2          |
| Norway         | 7          | 1.2          | 9          | 1.3          | 8          | 1.1          |
| South Korea    | 10         | 1.6          | 11         | 1.6          | 7          | 1.0          |
| Other          | 118        | 19.6         | 117        | 17.6         | 131        | 19.6         |
| <b>Total</b>   | <b>593</b> | <b>100.0</b> | <b>666</b> | <b>100.0</b> | <b>670</b> | <b>100.0</b> |

(a) Includes non-edible products e.g. marine fats and oils, fish meal, pearls and ornamental fish.

Source: *International Trade data base*.

## Fisheries legislation and territorial arrangements

The Commonwealth Parliament has enacted a number of laws governing fisheries in the Australian Fishing Zone (AFZ). Where appropriate arrangements under the Offshore Constitutional Settlement (OCS) have been concluded with the States or the Northern Territory, these laws can also have application in coastal waters.

The fisheries laws of the States and the Northern Territory apply to fishing in inland waters and, in the absence of OCS arrangements, to marine waters up to three nautical miles seaward of the territorial sea baseline. Where appropriate OCS arrangements have been concluded with the Commonwealth, these laws can also cover a part or the whole of the AFZ adjacent to that State or Territory.

Commonwealth and State/Territory fisheries laws enable the management of commercial fisheries. They generally provide for this to be done through licensing regimes, fisheries notices or individual fishery management plans.

### **Fisheries Management Act 1991 and the AFZ**

The Commonwealth *Fisheries Management Act 1991* applies to commercial fishing for swimming and sedentary species in the AFZ, excluding any waters that have been declared excepted waters. The AFZ is the area of waters generally between three and 200 nautical miles seaward of the territorial sea baseline of Australia and its external territories, excluding waters falling within the exclusive economic zone of another country, and covers a total of 8.9 million km<sup>2</sup>. The establishment of the AFZ in 1979 brought portions of oceanic tuna stocks, and demersal

and pelagic fish stocks previously exploited by foreign fishing vessels, under Australian control.

Fishery management plans are central to the Act and are to contain all essential rules applying to the management of a fishery. A management plan normally operates through a system of statutory fishing rights, which allows long-term access to the fishery. The Act also provides for limited term fishing permits, which are primarily designed for the management of fish resources that are not yet under a management plan. Individual transferable quotas (ITQs) are used as the preferred tool to achieve a reduction in fishing levels. A particular fishery is assigned a total allowable catch, and the market for ITQs will determine the most efficient allocation of resources.

Australia has an international obligation, under the United Nations Convention on the Law of the Sea, to allow foreign nations access to resources within the AFZ that are surplus to domestic fisheries requirements and where such access does not conflict with Australian management and development objectives. To facilitate the process, the Act allows Australia to make bilateral agreements or joint venture arrangements with the government or commercial interests of another country under which foreign fishing licences will be granted to boats from that country.

In 1997, Japan was the only country maintaining a licensed foreign fishing presence in the AFZ. Japanese vessels fished certain areas of the AFZ under an annually renewable bilateral access agreement between the Japanese Government and the Australian Government. Foreign fishing licences are available under the bilateral access arrangement. The main species caught by Japanese vessels in the AFZ are yellowfin, southern bluefin, and bigeye and albacore tunas.

Australia, Japan and New Zealand are parties to the Convention for the Conservation of Southern Bluefin Tuna (CCSBT), which came into force in 1994. As part of its conservation management responsibilities for the global southern bluefin tuna industry, the CCSBT Commission annually determines a total allowable catch for the fishery and allocates this between the three CCSBT parties in the form of national quotas.

In 1997, Australia had maritime delimitation agreements with Papua New Guinea, the Solomon Islands and France. In addition, a maritime delimitation agreement was reached

with Indonesia (a Provisional Fisheries Surveillance and Enforcement Line having been agreed in 1981) and is likely to come into force in 1998. Australia has yet to enter into a maritime delimitation agreement with New Zealand.

The Treaty on Fisheries between the Governments of Certain Pacific Island States and the Government of the United States forms the Schedule to the Act. The effect of this is that United States tuna boats are given treaty licences in accordance with the provisions of the Treaty.

Whales are a protected species in the AFZ.

### Australian Fisheries Management Authority

The *Fisheries Administration Act 1991* establishes the Australian Fisheries Management Authority (AFMA) and prescribes its objectives. These are:

- implementing efficient and cost-effective fisheries management on behalf of the Commonwealth;
- ensuring that the exploitation of fisheries resources and the carrying on of any related activities are conducted in a manner consistent with the principles of ecologically sustainable development, in particular the need to have regard to the impact of fishing activities on non-target species and the marine environment;
- maximising economic efficiency in the exploitation of fisheries resources;
- ensuring accountability to the fishing industry and to the Australian community in AFMA's management of fisheries resources; and
- achieving government targets in relation to the recovery of the cost of AFMA.

The Act specifies AFMA's functions, which include a duty to engage in appropriate consultation and to devise and implement management plans, adjustment programs and exploratory/feasibility fishing programs. AFMA is also to establish priorities for management related research and arrange for such research to be undertaken. AFMA's management responsibilities include arrangements with States and Territories. Under the Fisheries Management Act, AFMA is given additional functions in areas such as keeping a register of statutory fishing rights, surveillance and enforcement.

## Other legislation

The *Fishing Levy Act 1991*, *Foreign Fishing Licences Levy Act 1991* and *Fisheries Agreements (Payments) Act 1991* enable the imposition of management levies and access fees payable by Australian and foreign fishermen, foreign governments and foreign commercial interests. The *Statutory Fishing Rights Charge Act 1991* enables a charge to be levied on the grant of new fishing rights.

The *Torres Strait Fisheries Act 1984* gives effect in Australian law to the fisheries elements of the Torres Strait Treaty. The Act applies in the area of Australian jurisdiction in the Torres Strait Protected Zone, and in areas outside but near that zone that have been proclaimed in respect of particular fisheries which Australia and Papua New Guinea have agreed to manage jointly under the treaty or which are referred to in the treaty.

## Fisheries research

The main aim of fisheries research in Australia is to provide a background of biological, technical and economic information which will provide guidance for the efficient and sustainable utilisation of fisheries resources. Much of the research already undertaken has been directed at formulating recommendations for management of various fisheries. Research work, including feasibility fishing projects involving foreign fishing vessels, is also carried out and is expected to lead to the development of new fisheries, the expansion of under-exploited fisheries, greater economy in operations and the use of more efficient equipment and methods.

The Fisheries Research and Development Corporation (FRDC) was established in July 1991 by Regulation under the *Primary Industries and Energy Research and Development Act 1989*. Its objectives include:

- increasing the economic, environmental or social benefits to members of the Australian fishing and aquaculture industry and to the community generally by improving the production, processing, storage, transport or marketing of fish and fish products; and
- achieving the sustainable use and the sustainable management of fisheries resources.

FRDC investigates and evaluates the requirements for research and development in relation to the fishing industry; coordinates and

funds such research and development activities; and facilitates the dissemination, adoption and commercialisation of results.

FRDC is funded by an annual unmatched grant equal to 0.5% of GVP (the average gross value of fisheries production over the three immediately preceding financial years) and by research levies collected from the fishing industry which the Government matches to a maximum of 0.25% of GVP. In 1996–97, the Commonwealth Government provided about \$11.3 million to FRDC. Industry provided an additional \$2.5 million.

Organisations in Australia at present engaged in research into fisheries matters are:

- CSIRO Division of Fisheries Research, which has its headquarters and main laboratory in Tasmania, and regional laboratories in Western Australia and Queensland (fisheries science);
- CSIRO Division of Oceanography, which has its headquarters and laboratory in Tasmania;
- CSIRO Division of Food Research, which conducts research into handling, storage, processing and transportation of fish at its laboratory in Tasmania;
- The Australian Fisheries Service, Department of Primary Industries and Energy, Canberra;
- Bureau of Resource Sciences, Department of Primary Industries and Energy, Canberra;
- Australian Bureau of Agricultural and Resource Economics, Department of Primary Industries and Energy, Canberra;
- State and Territory fisheries departments (research vessels are operated by all States);
- Great Barrier Reef Marine Park Authority (GBRMPA) located in universities in Townsville and Canberra ; and
- private fishing companies (surveys of fisheries resources, research into handling, processing and marketing).

## Aquaculture

Aquaculture is one of Australia's fastest growing primary industries. As indicated earlier, in 1995–96 the annual farmgate value of production was \$338m, compared with \$188m in 1989–90. The major sectors contributing to this growth were edible oysters, tuna, salmon and prawns.

Australian aquaculture is expected to continue to show strong growth for the next 10 years and, on current estimates, the value of production will be in excess of \$1 billion by the end of this period. The industry provides regional development and employment opportunities in rural Australia, while contributing to export growth.

In 1994 the National Strategy for Aquaculture in Australia was released, and the first review of this strategy has occurred. This review has shown gradual progress against the following key goals:

- industry structure and organisation;
- relationship between aquaculture and capture fisheries;
- government framework;
- environmental management;
- water and land use planning;
- research and development;
- marketing and product development;
- education and training;
- extension services; and
- quarantine and movement.

The operational responsibility for the development of aquaculture in Australia rests with State and Territory Governments. A number of States have in place aquaculture and coastal development plans. These plans take into account the needs of the multiple user groups

and provide a focus for aquaculture as an industry and as a legitimate user of water and land resources.

Aquaculture provides a basis for improved biological understanding of Australia's native marine and freshwater species and can be used to re-establish populations of endangered aquatic species. In the future, aquaculture may also be able to improve the catch in both recreational and commercial fisheries through re-stocking programs.

### Recreational fishing

In August 1996 the Federal Minister for Resources and Energy launched The National Code of Practice for Recreational and Sport Fishing. This new code will help to conserve fish stocks by encouraging people to take no more than they need and to protect the environment. The code provides guidelines on environmentally responsible fishing and boating practices, and on the humane treatment of fishes. It also calls on people to respect the rights of others, for example by seeking the permission of landholders and traditional owners to enter land.

The most recent ABS data obtained on the recreational fishing catch were collected in the 1992 Home Production survey. Results of this collection can be found in *Home Production of Foodstuffs, Australia* (7110.0).

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## Introduction

**M**ining, as defined in the 1993 edition of the Australian and *New Zealand Standard Industrial Classification (ANZSIC)* (1292.0), broadly relates to the extraction of minerals occurring naturally as solids such as coal and ores; liquids such as crude petroleum; or gases such as natural gas.

The mining industry contributed \$18,668m or 4% of Australia's Gross Domestic Product (GDP) in 1995–96.

First stage processing of minerals and mineral extracts, while closely related to the mining industry, is included as part of the manufacturing industry. See *Chapter 19, Manufacturing* for details.

## Main features of 1995–96

Table 17.1 provides a summary of the operations of mining industries in 1995–96. Turnover in the mining industry sector rose by 6% to \$30,732m,

while employment in the sector increased by 2% to 56,450 persons between June 1995 to June 1996.

Turnover rose in the Coal industry by \$647m (7%) to \$9,989m and in the Gold mining industry by \$587m (14%) to \$4,756m. The Mineral sand mining industry showed the largest percentage increase of 20% to \$758m. Other industries to show increases in turnover were Copper, up 17% to \$1,197m; and Silver-lead-zinc ore, up 13% to \$1,206m.

Production decreases in the Victorian fields resulted in an overall decline in turnover in the Australian Oil and gas extraction industry, by 2% to \$7,512m.

The Coal mining industry remained the largest contributor to total turnover for the mining industries, accounting for 33%. Large contributions by other industries to total turnover were from Oil and gas extraction 24% and Gold ore mining 15%.

Table 17.2 contains a summary of the operations of mining industries in 1995–96 by State and Territory.

**17.1 MINING, Summary of Operations By Industry — 1995–96**

|                                | Employment<br>at 30 June(a) | Wages and<br>salaries(b) | Turnover(c)   | Stocks       |              | Purchases<br>and<br>selected<br>expenses | Value<br>added | Net capital<br>expenditure |
|--------------------------------|-----------------------------|--------------------------|---------------|--------------|--------------|------------------------------------------|----------------|----------------------------|
|                                |                             |                          |               | Open         | Close        |                                          |                |                            |
|                                | no.                         | \$m                      | \$m           | \$m          | \$m          | \$m                                      | \$m            | \$m                        |
| Coal mining                    | 25 138                      | 1 759                    | 9 989         | 742          | 804          | 5 079                                    | 4 993          | 1 122                      |
| Oil and gas extraction         | 4 221                       | 292                      | 7 512         | 208          | 288          | 701                                      | 6 891          | 1 509                      |
| Metal ore mining               |                             |                          |               |              |              |                                          |                |                            |
| Iron ore mining                | 6 011                       | 375                      | 3 178         | 301          | 322          | 1 214                                    | 1 983          | 468                        |
| Bauxite mining                 | 1 698                       | 92                       | 867           | 42           | 44           | 298                                      | 572            | 40                         |
| Copper ore mining              | 2 681                       | 148                      | 1 197         | 160          | 122          | 475                                      | 701            | 184                        |
| Gold ore mining                | 8 749                       | 449                      | 4 756         | 529          | 671          | 2 489                                    | 2 409          | 1 055                      |
| Mineral sand mining            | 1 861                       | 81                       | 758           | 152          | 159          | 348                                      | 418            | 98                         |
| Silver-lead-zinc ore<br>mining | 3 495                       | 196                      | 1 206         | 120          | 159          | 600                                      | 646            | 159                        |
| Other(d)                       | 2 593                       | 153                      | 1 270         | 303          | 293          | 553                                      | 707            | 351                        |
| Total metal ore<br>mining      | 27 088                      | 1 495                    | 13 232        | 1 607        | 1 770        | 5 976                                    | 7 436          | 2 355                      |
| <b>Total mining 1995–96</b>    | <b>56 447</b>               | <b>3 546</b>             | <b>30 732</b> | <b>2 557</b> | <b>2 862</b> | <b>11 755</b>                            | <b>19 320</b>  | <b>4 986</b>               |
| Total mining 1994–95           | 55 348                      | 3 590                    | 28 936        | 2 522        | 2 562        | 10 063                                   | 18 914         | 4 698                      |

(a) Includes working proprietors. (b) Excludes amounts drawn by working proprietors. (c) Includes transfers out to other establishments of the same management unit where appropriate. (d) Includes nickel ores, tin ores, uranium ores and non-ferrous metal ores n.e.c..

Source: *Mining Industry, Australia, Preliminary (8401.0)*.

## 17.2 MINING, Summary of Operations By State/Territory — 1995–96

|              | Employment at<br>30 June(a) | Wages and<br>salaries(b) | Turnover(c)   | Stocks       |              | Purchases and<br>selected<br>expenses | Value added   | Net capital<br>expenditure |
|--------------|-----------------------------|--------------------------|---------------|--------------|--------------|---------------------------------------|---------------|----------------------------|
|              |                             |                          |               | Open         | Close        |                                       |               |                            |
|              | no.                         | \$m                      | \$m           | \$m          | \$m          | \$m                                   | \$m           | \$m                        |
| NSW          | 14 902                      | 1 026                    | 4 987         | 369          | 462          | 2 205                                 | 2 898         | 700                        |
| Vic.         | 1 926                       | 112                      | 3 303         | 71           | 77           | 243                                   | 3 064         | 658                        |
| Qld          | 15 127                      | 982                      | 7 227         | 663          | 644          | 3 886                                 | 3 325         | 625                        |
| SA           | 2 101                       | 109                      | 996           | 92           | 96           | 250                                   | 764           | 136                        |
| WA           | 19 414                      | 1 138                    | 12 636        | 1 091        | 1 295        | 4 546                                 | 8 290         | 2 606                      |
| Tas.         | 1 162                       | 67                       | 381           | 49           | 57           | 170                                   | 218           | 94                         |
| NT           | 1 814                       | 112                      | 1 201         | 222          | 231          | 455                                   | 761           | 168                        |
| <b>Aust.</b> | <b>56 447</b>               | <b>3 546</b>             | <b>30 732</b> | <b>2 557</b> | <b>2 862</b> | <b>11 755</b>                         | <b>19 320</b> | <b>4 986</b>               |

(a) Includes working proprietors. (b) Excludes amounts drawn by working proprietors. (c) Includes transfers out to other establishments of the same management unit where appropriate.

Source: *Mining Industry, Australia, Preliminary (8401.0)*.

## Mineral production

Australian production in the Metallic minerals, Coal, and Oil and gas industries for 1995–96 was valued at \$28,784m, an increase of 8% over the previous year (table 17.3). Metallic minerals production accounted for the largest proportion (44%) of the total, while Oil and gas, and Coal were each 28% of the total.

The increase in the value of mineral production in 1995–96 was primarily due to growth in Metallic minerals, which rose 8% to \$12,708m.

Victoria, South Australia and Tasmania all recorded falls in the value of Metallic minerals production while all other States recorded rises. Increases in both production and prices of most minerals contributed to the increases in value of production.

By value, the two largest components of Metallic minerals production were Gold and Iron ore which accounted for \$4,541m and \$3,126m respectively, for a combined share of 60%.

Western Australia accounted for both the largest share of Metallic minerals production with \$8,701m (68%), and the largest share of total mineral production with \$13,041m (45% of the total).

The value of production of the Oil and gas industry rose to \$8,070m from \$7,683m in 1994–95. This represented an increase of \$387m or 5%, primarily due to increased production for most commodities.

The value of coal production rose 9%, primarily due to increased production and higher prices. The total value of the Coal industry was \$8,006m in 1995–96. Queensland and New South Wales are the major coal producing States, with 38% and 37% of production respectively.

In 1996 Australia remained the world's largest producer of bauxite (39% of total world production); diamonds (38%); lead (18%); and zircon, a mineral sands concentrate (56%).

## 17.3 Mineral production, Selected Minerals, Australia

|                                                              | Units             | 1991–92       | 1992–93       | 1993–94       | 1994–95       | 1995–96       |
|--------------------------------------------------------------|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Metallic minerals</b>                                     |                   |               |               |               |               |               |
| Bauxite                                                      | kilotonnes        | 34 788        | 40 946        | 43 306        | 45 384        | 50 724        |
| Copper concentrate(a)                                        | kilotonnes        | 915           | 1 254         | 1 322         | 9 405         | 1 297         |
| Copper precipitate(b)                                        | tonnes            | 6 203         | 8 174         | 16 192        | 18 888        | 19 838        |
| Gold bullion (dore)(c)                                       | kilograms         | 259 656       | 275 331       | 274 687       | 298 697       | 291 965       |
| Iron ore(d)                                                  | kilotonnes        | 114 781       | 115 703       | 123 631       | 137 525       | 137 267       |
| Lead concentrate                                             | kilotonnes        | 858           | 856           | 873           | 766           | 774           |
| Manganese ore(e)                                             | kilotonnes        | 375           | 597           | 815           | n.p.          | 1 298         |
| Mineral sands(f)                                             | kilotonnes        | 1 954         | 2 118         | 2 252         | 2 375         | 2 491         |
| Uranium concentrate (U3O8)(a)                                | tonnes            | 2 901         | 1 342         | 1 457         | n.a.          | 3 200         |
| Zinc concentrate(g)                                          | kilotonnes        | 1 927         | 2 011         | 1 890         | 1 699         | 1 295         |
| Total value of metallic minerals                             | \$ million        | (h)10 957     | (h)10 920     | (h)10 861     | (h)11 715     | 12 708        |
| <b>Coal</b>                                                  |                   |               |               |               |               |               |
| Black coal                                                   | kilotonnes        | 176 570       | 177 970       | 177 874       | 191 903       | 194 492       |
| Brown coal                                                   | kilotonnes        | 50 731        | 47 912        | 49 684        | 50 679        | 54 281        |
| Total value of coal                                          | \$ million        | (i)7 216      | (i)(j)7 585   | (i)(j)7 418   | (i)(j)7 340   | (j)8 006      |
| <b>Oil &amp; gas</b>                                         |                   |               |               |               |               |               |
| Crude oil (k)                                                | megalitres        | 31 984        | 30 592        | 29 583        | 31 301        | 30 763        |
| Natural gas(l)                                               | gigalitres        | 16 289        | 16 631        | 15 959        | 17 486        | 19 169        |
| Ethane                                                       | gigalitres        | 182           | 187           | 202           | 208           | 199           |
| Propane(m)                                                   | megalitres        | 2 064         | 2 078         | 2 115         | 1 999         | 2 092         |
| Butane(m)                                                    | megalitres        | 1 574         | 1 651         | 1 622         | 1 480         | 1 544         |
| Liquefied natural gas                                        | kilotonnes        | 4 250         | 4 922         | 5 732         | 6 888         | 7 346         |
| Total value of oil & gas                                     | \$ million        | 7 812         | 8 216         | 7 423         | 7 683         | 8 070         |
| <b>Total value of metallic minerals, coal, oil &amp; gas</b> | <b>\$ million</b> | <b>25 985</b> | <b>26 721</b> | <b>25 702</b> | <b>26 738</b> | <b>28 784</b> |

(a) Excludes South Australia. (b) Includes copper concentrate in other forms. (c) Includes alluvial gold. (d) Includes iron ore pellets. (e) Metallurgical grade. (f) Includes ilmenite, beneficiated ilmenite, leucoxene, monazite, rutile, synthetic rutile and zircon. (g) Includes zinc-lead concentrate. (h) Includes Tasmanian coal production. (i) Excludes Tasmania. (j) Excludes briquettes. (k) Stabilised. Includes condensate. (l) Includes field and plant usage. (m) Excludes refinery production.

Source: Mining Industry, Australia, Preliminary (8401.0).

## Exports

Australia is the world's largest exporter of black coal, iron ore, bauxite, lead, diamonds, zinc ores and concentrates and mineral sands, the second largest exporter of alumina and uranium and the third largest exporter of aluminium and gold.

Exports of mining products rose in value by 11% in 1995–96 to \$16,523m. These contributed 22% towards total merchandise exports.

The percentage contributions of the major mineral products to total merchandise exports have remained stable over the period 1990–91 to 1995–96. Black coal remains the largest single export item and the main mineral exported, with a value of \$7,771m in 1995–96, 10% of total merchandise exports. Other major exports were iron ore (\$2,863m, 4% of total merchandise exports), crude oil (\$1,593m, 2%), copper (\$486m, 1%), zinc ores (\$433m, 1%) and uranium (\$242m, less than 1%).

Exports of mining products, together with basic manufactures of mineral origin, rose by 13% in 1995–96 to \$34,123m. However, as a proportion of total merchandise exports they remained stable at 45% in 1995–96. The major manufactured minerals to be exported were alumina (\$2,717m, 4%) and aluminium (\$2,379m, 3%).

The petroleum sector also had rises in export earnings during 1995–96, with increased earnings for LNG of \$171m (14%), LPG earnings increasing \$35m (23%) and refined petroleum products rising \$214m (30%).

Among the commodities to exhibit rises in export earnings during 1995–96, refined gold rose \$917m (20%), alumina \$486m (22%), aluminium \$206m (9%), and nickel \$181m (18%). The stronger export performance reflected both higher world prices and export volumes for most minerals.

The main minerals with declines in export earnings in 1995–96 were crude oil and other refinery feedstock down \$51m (3%), diamonds \$40m (7%) and bauxite \$3m (3%).

## Imports

Mineral resources imports were valued at \$3,201m in 1995–96, an increase of \$397m (14%) on the 1994–95 total of \$2,804m.

With the inclusion of basic manufactures of mineral origin, imports of mineral resources were valued at \$6,702m in 1995–96, a rise of \$562m (9%) on 1994–95. Contributors to the increase were: crude oil and other refinery feedstock, up \$560m (19%); petroleum refinery products, up \$89m (13%); and diamonds, up \$10m (9%). The increases were offset by small declines in all other commodities.

## Review of selected commodities

### Gold

Gold production (content of all minerals) in Australia during 1995–96 was 263,916 kg. Western Australia accounted for most of the production with 78%, followed by Queensland (11%), the Northern Territory (6%) and New South Wales (4%).

Gold is Australia's second biggest export earning commodity. In 1995–96 it accounted for 7% of total merchandise exports, at a value of \$5,540m. The main markets were Republic of Korea (\$2,187m), Singapore (\$1,174m) and Japan (\$872m).

The gold mining industry employed 8,750 people at the end of June 1996, 15% of total employment in the metallic minerals, coal, oil and gas industries, making it the second highest employer in the mining sector behind coal.

Australia accounts for about 12% of estimated world gold production. South Africa is the world's biggest gold producer with 21%.

### Iron ore

Iron ore production in 1995–96 was 137.3 million tonnes, of which 92% or 126.2 million tonnes were exported. Iron ore mining employed 6,010 people at the end of June 1996.

Almost 97% of production takes place in Western Australia's Pilbara region. Iron ore is also mined in South Australia and Tasmania.

Iron ore accounted for \$2,863m or 4% of total merchandise exports in 1995–96. Japan is Australia's largest market, taking 45% of Australia's exports (in dollar terms). Other important markets are China (20%), Republic of Korea (15%), Taiwan (5%), the United Kingdom (5%) and Germany (4%).

### Bauxite and alumina

Australia is the world's largest bauxite and alumina producer, accounting for 39% of estimated world bauxite and alumina production. It is the fourth largest aluminium producer.

Bauxite mining employed 1,700 people nationally at the end of June 1996, with mines in Western Australia south of Perth, in the Northern Territory on the Gove Peninsula and in Queensland at Weipa. Generally the bauxite ore is not sold but is processed to alumina for sale or for conversion to aluminium. Alumina production reached 13.3 million tonnes in 1995–96, while refined aluminium production was 1.3 million tonnes.

In 1995–96, aluminium ranked fifth in value among the major commodity exports, with 4% of total merchandise exports, 1 million tonnes valued at \$2,720m; alumina ranked sixth with 3% of total merchandise exports, 11 million tonnes valued at \$2,635m.

Japan was the major market for aluminium, taking 42%; Northeast and Southeast Asia together (which includes Japan) accounted for over 89% of Australia's exports.

### Mineral sands

Mineral sands comprise ilmenite, leucoxene, rutile, monazite and zircon, which are produced from deposits on the east and west coasts of Australia. Australia was the world's largest producer of zircon (56%) in 1996.

The value of production increased by 32% to \$761.3m in 1995–96. For the same period, exports were valued at \$481m, a rise of 60% from the 1994–95 value.

Ilmenite, leucoxene and rutile are sources of titanium metal and are used in the manufacture of paint and other pigments and as a coating on welding rod electrodes. Zircon is the major

source of zirconium, which is a corrosion resistant metal used in nuclear reactors and chemical processing equipment.

Thorium is a radioactive mineral that is about three times as abundant as uranium, but occurs in fewer geological environments and in lower grade accumulation. It is used in incandescent gas mantles and as a fuel in nuclear reactors. Most of the world's resources of thorium occur in monazite, which is produced in Australia from titanium-bearing mineral sands. Exports from Australia of thorium and thorium-containing ores require the approval of the Minister for Primary Industries and Energy under the Customs (Prohibited Exports) Regulations.

## Diamonds

Diamonds were first extracted in 1982 in Western Australia.

Australia is now the world's largest producer of diamonds (gem and industrial) with 38% of world production in 1996. Most of this is from the Argyle diamond mine in the Kimberley region of Western Australia. This mine commenced operations in December 1985 and is the world's biggest single producer of diamonds.

In 1995–96, 33.8 mega carats of diamonds (sorted and unsorted) were exported, with a value of \$531m. This represents a fall of 7% from the 1994–95 value.

## Uranium

Australia has about 30% of the world's low-cost uranium reserves (excluding those in the current and former centrally planned economies). Deposits occur in the Northern Territory, Western Australia, South Australia and Queensland.

Australia's reasonably assured uranium resources, at December 1995, totalled 629,000 tonnes of uranium recoverable at less than \$US80 per kg of uranium.

The Australian Government no longer maintains its three mines policy with regard to uranium mining, which had limited the number of mines and prevented the licencing of new mines. However, restrictions on the export of uranium still apply.

The Ranger deposit was discovered in 1969, 250 km east of Darwin, and mining commenced in 1981. The Olympic Dam deposits were discovered in 1975 and mining commenced in 1988.

Production of uranium for 1995–96 was 5,050 tonnes, with 3,200 tonnes from Ranger and 1,850 tonnes from Olympic Dam.

All Australian uranium production is exported, in the form of yellow cake, principally for use as fuel for nuclear power stations. Minor quantities are used in medical, industrial and scientific applications.

Uranium oxide exports in 1995–96 were 5,286 tonnes, valued at \$242m.

All exports of Australian uranium are subject to stringent safeguards which provide assurance that none of the material is diverted from peaceful uses.

The *Nuclear Non-Proliferation (Safeguards) Act 1987* gives domestic effect to Australia's international nuclear non-proliferation obligations which require domestic legislation. The legislation establishes a system of permits for the possession and transport of nuclear material (defined to cover uranium, thorium and plutonium), and other physical items such as equipment and material used in nuclear reactors. The permit and related provisions also deal with the possession and communication of sensitive information about nuclear technology, in circumstances where that information is not already a matter of public record. The legislation is administered by the Australian Safeguards Office.

Australia maintains a small nuclear reactor for research and the manufacture of nuclear medicines. However, Australia has no nuclear power stations.

In 1995 Australia produced 17% of the world's uranium (excluding production in the current and former centrally planned economies).

## Coal

Black coal is currently the largest source of primary energy in Australia. By world standards, in relation to present population and consumption, Australia has ready availability of easily worked deposits of coal. The main black coal fields are located in New South Wales and Queensland, not far from the coast and the main centres of population.

Of Australia's identified resources of black coal, currently estimated at 68 gigatonnes, about 49 gigatonnes are considered to be economically recoverable. They are located largely in the Sydney Basin in New South Wales and the

Bowen Basin in Queensland. There are other coal-bearing basins in New South Wales and Queensland, while small deposits are being worked in Western Australia, South Australia and Tasmania.

Black coal production in 1995–96 was 194 million tonnes, most of it from Queensland (93.8 million tonnes) and New South Wales (91.9 million tonnes). The coal industry was the single largest employer in the mining sector at the end of June 1996, employing 25,150 people.

More than 48% of New South Wales coal production is from underground mines, whereas over 88% of Queensland coal production is from open-cut mines.

Black coal produced in South Australia and Western Australia is used for electricity generation, while coal mined in Tasmania is used for industrial purposes such as steam generation.

Black coal is Australia's biggest export earning commodity at \$7,771m, accounting for 10% of the total value of merchandise exports in 1995–96. In 1994–95 it was \$6,873m (8% of total exports). The biggest market for Australian coal in 1995–96 was Japan, which bought 60.3 million tonnes for \$3,332m (43% of total sales). The Republic of Korea bought 17.6 million tonnes for \$981m (13%), and Taiwan 9.9 million tonnes for \$519m (7%).

Two-thirds of black coal production, consisting of steaming coal and hard and soft coking coal, is exported.

Australia's economic demonstrated resources (EDR) of brown coal were estimated to be around 46 gigatonnes at December 1995. The main deposits are located in Victoria's Latrobe Valley (40 gigatonnes). Small deposits exist in other areas of south Gippsland, in south-eastern Victoria at Gelliondale and in the south-central region at Anglesea, Bacchus Marsh and Altona. Deposits are also known to exist at many places along the southern margin of the continent, and as far north as central Queensland. Large deposits are being tested in the Kingston area of South Australia, the Esperance area of Western Australia and at Rosevale in the north-east of Tasmania. Brown coal is mined only in Victoria and is used mainly for electricity generation.

During 1995, significant operational changes for the three Latrobe Valley brown coal mines led to each owning and operating its own mine to

supply its power station to generate electricity for Victorian consumers.

Because brown coal has a relatively low specific-energy value and high water content, its utilisation depends on large-scale, low-cost mining and negligible transportation costs in its raw state. In Victoria, the brown coal industry has reached a high degree of sophistication in mining, in on-site development of power generation, and in briquette and charcoal manufacture.

## Crude oil and condensate

Indigenous production of crude oil and condensate in 1995–96, at 30,763 megalitres (530,000 barrels per day), was slightly lower than production in 1994–95 of 31,301 megalitres. In 1995–96, the Bonaparte Basin produced 1,377 megalitres of crude oil, nearly 6% of the total indigenous oil production. Production of crude oil from the Gippsland Basin accounted for 47% of total indigenous crude oil production. The North West Shelf was the major producer of condensate during 1995–96 with 74% of indigenous production sourced in that region.

Export volumes of crude oil and condensate decreased by 5% to 10,899 megalitres in 1995–96 compared with 1994–95. The main markets were Japan, Taiwan, Indonesia and Singapore. Imports of crude oil and condensate increased by 15% to 23,703 megalitres.

## Liquefied petroleum gas

Liquefied petroleum gas (LPG) is a valuable co-product of oil and gas production and petroleum refining. The major constituents of LPG are propane and iso- and normal-butane, which are gaseous at normal temperatures and pressures and are easily liquefied at moderate pressures or reduced temperatures. Operations involving LPG are expensive in relation to other liquid fuels because LPG has to be refrigerated or pressurised when transported and stored. LPG is an alternative transport fuel for high mileage vehicles in urban areas as well as a petrochemical feedstock and domestic fuel.

The June 1996 assessment by the Bureau of Resource Sciences of Australia suggested that approximately 725m barrels of LPG are undiscovered. A large part of the undiscovered LPG is thought to occur in the Exmouth Plateau and Rankin Platform of the Carnarvon Basin and in the Browse Basin.



Production of naturally occurring LPG in Australia in 1995–96 was 3,636 megalitres. The major contributors were the Bass Strait fields (2,247 megalitres or 62% of total production) and the Cooper Basin (897 megalitres or 25% of total production). About 40% of domestic LPG production is exported (1,469 megalitres in 1995–96), mainly to Japan.

The Australian Competition Consumer Commission (ACCC) maintains a monitoring role in the determination of the maximum wholesale price of LPG in each capital city.

## Natural gas

During 1995–96, 29,985 million cubic metres of natural gas (including liquefied natural gas (LNG)) were produced for domestic consumption and export, an increase of 3% from 1994–95 production. In 1995–96, 15,334 million cubic metres of natural gas from the export phase of the North West Shelf Project were liquefied for shipment. This export earned

\$1,372m and was 51% of total Australian natural gas production.

## Oil and gas resources

The prospects of further discoveries of petroleum in Australia are considered to be only modest. The sedimentary basins showing the most prospects are the Carnarvon, Bonaparte, Gippsland, Browse, offshore Perth, offshore Otway and Eromanga Basins. Consistent with the existing pattern of discoveries, undiscovered oil is likely to be of the light, low sulphur type, and more gas fields than oil fields are considered likely to be found. Assessments by the Bureau of Resource Sciences indicate that there is an average probability of finding at least another 320 gigalitres (2,000 million barrels) of crude oil in Australia. This compares with demonstrated economically recoverable resources of 277 gigalitres (1,742 million barrels) and demonstrated sub-economically recoverable resources of 24 gigalitres (151 million barrels) as at December 1995 (table 17.4).

**17.4 OIL AND GAS RESOURCES(a), December 1995**

| Basin                                         | Crude oil<br>GL | Gas condensate<br>GL | LPG<br>GL  | Natural gas<br>Bcm |
|-----------------------------------------------|-----------------|----------------------|------------|--------------------|
| <b>Demonstrated economic resources(b)</b>     |                 |                      |            |                    |
| Gippsland (Vic.)                              | 114             | 18                   | 33         | 173                |
| Carnarvon (WA)                                | 102             | 128                  | 98         | 907                |
| Cooper/Eromanga (SA/Qld)                      | 9               | 6                    | 11         | 77                 |
| Amadeus and Bonaparte (WA/NT)                 | 48              | 29                   | 1          | 84                 |
| Perth (WA)                                    | 2               | 0                    | 0          | 4                  |
| Bowen/Surat/Adavale (Qld)                     | 0               | 0                    | 0          | 6                  |
| Canning (WA)                                  | 0               | —                    | —          | —                  |
| Bass (Tas.)                                   | 2               | 1                    | 1          | 3                  |
| Otway (Vic.)                                  | —               | 0                    | 0          | 10                 |
| <b>Total</b>                                  | <b>277</b>      | <b>183</b>           | <b>144</b> | <b>1 264</b>       |
| <b>Demonstrated sub-economic resources(c)</b> |                 |                      |            |                    |
| Gippsland (Vic.)                              | 13              | 4                    | 1          | 33                 |
| Bonaparte (WA/NT)                             | 4               | 4                    | 4          | 130                |
| Carnarvon (WA)                                | 6               | 2                    | 0          | 254                |
| Cooper/Eromanga (SA/Qld)                      | 0               | 3                    | 5          | 36                 |
| Browse (WA)                                   | —               | 49                   | 74         | 625                |
| Perth (WA)                                    | —               | —                    | —          | —                  |
| Amadeus (NT)                                  | —               | 0                    | 0          | 7                  |
| Bowen/Surat/Adavale (Qld)                     | —               | —                    | —          | 1                  |
| Bass (Tas.)                                   | 1               | 5                    | 7          | 7                  |
| Otway (Vic.)                                  | —               | 0                    | 0          | 4                  |
| <b>Total</b>                                  | <b>24</b>       | <b>67</b>            | <b>92</b>  | <b>1 099</b>       |

(a) Based on the McKelvey classification which subdivides resources in terms of the economic feasibility of extraction and their certainty of occurrence. (b) Demonstrated economic resources are resources judged to be economically extractable and for which the quantity and quality are computed from specific measurements and extrapolations on geological evidence. (c) Demonstrated sub-economic resources are similar to demonstrated economic resources in terms of certainty of occurrence, but are judged to be sub-economic at present.

Source: Department of Primary Industries and Energy.

## Minerals processing and treatment

As few minerals can be directly used in the form in which they are mined, most minerals undergo processing and treatment before utilisation.

Table 17.5 shows the production of the main manufactured products of mineral origin during recent years.

## Mineral resources and geology

Australia has the world's largest economically recoverable resources of bauxite, tantalum, lead, mineral sands (ilmenite, rutile and zircon), silver, uranium and zinc. In addition, Australia's economic demonstrated resources are within the top six world-wide for black coal, brown coal, cobalt, copper, gold, iron ore, lithium,

manganese ore, nickel, rare earths, gem/near gem diamonds and industrial diamonds. Australia has almost all of the world's opal resources, and a significant share of the world's sapphire resources.

The diversity of Australian geology provides the basis for its wide range of economically important minerals and variety of deposit types. Its classified geological settings range from major Precambrian Shields composed of Archaean (older than 2.5 billion years) granite greenstone terrains, through to extensive Proterozoic (2.5 to 0.5 billion years) basins and metamorphic belts, to the younger Palaeozoic fold belts (0.5 to 0.25 billion years). Despite more than a hundred years of exploration, mineralisation is still being discovered in outcrops. However, most significant mineral deposits discovered in the past two decades were hidden beneath cover and this is likely to be the pattern in the future, because prospective

**17.5 PRODUCTION(a) OF PRINCIPAL MANUFACTURED PRODUCTS OF MINERAL ORIGIN**

|                              | Units  | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96p |
|------------------------------|--------|---------|---------|---------|---------|----------|
| <b>METALS(b)</b>             |        |         |         |         |         |          |
| Non-ferrous                  |        |         |         |         |         |          |
| Alumina                      | '000 t | 11 824  | 12 221  | 12 761  | 12 940  | 13 293   |
| Refined aluminium            | '000 t | 1 234   | 1 306   | 1 384   | 1 285   | 1 331    |
| Refined copper               | '000 t | 276     | 312     | 351     | 281     | 300      |
| Lead bullion (for export)(c) | '000 t | 202     | 234     | 208     | r177    | 181      |
| Refined lead                 | '000 t | 215     | 225     | 220     | r205    | 224      |
| Refined zinc                 | '000 t | 325     | 332     | 316     | 312     | 330      |
| Refined tin                  | t      | 248     | 258     | 190     | 455     | 550      |
| Ferrous                      |        |         |         |         |         |          |
| Pig iron                     | '000 t | 6 394   | 6 445   | 7 209   | r7 449  | 7 554    |
| Precious                     |        |         |         |         |         |          |
| Refined gold(d)              | kg     | 281 835 | 288 188 | 307 336 | 296 626 | 317 950  |
| Refined silver               | t      | 382     | 355     | 379     | 349     | 350      |
| <b>FUELS</b>                 |        |         |         |         |         |          |
| Petroleum products           |        |         |         |         |         |          |
| Diesel-automotive oil        | ML     | 10 279  | 10 603  | 11 063  | 11 365  | 12 202   |
| Industrial and marine fuel   | ML     | 111     | 87      | 95      | 129     | 78       |
| Fuel oil                     | ML     | 2 571   | 2 498   | 2 263   | 2 431   | 1 998    |
| Petrol                       | ML     | 17 074  | 17 728  | 17 724  | 17 911  | 18 358   |
| <b>BUILDING MATERIALS</b>    |        |         |         |         |         |          |
| Clay bricks                  | mill.  | 1 632   | 1 722   | 1 814   | 1 860   | 1 455    |
| Portland cement              | '000 t | 5 731   | 6 225   | 6 733   | 7 124   | 6 397    |
| <b>CHEMICALS</b>             |        |         |         |         |         |          |
| Sulphuric acid               | '000 t | 816     | 868     | 833     | n.a.    | n.a.     |
| Superphosphate(e)            | '000 t | 1 337   | 1 440   | 1 344   | 1 590   | 1 697    |

(a) Some products exclude production of single establishment manufacturing businesses employing less than four persons and production of establishments predominantly engaged in non-manufacturing activities but which may carry on, in a minor way, some manufacturing. (b) Excludes secondary metal with the exception of basic iron. (c) Metallic content. (d) Newly won gold of Australian origin. (e) Double and triple superphosphate expressed in terms of single phosphate, that is 9% P equivalent.

Source: Australian Bureau of Agricultural and Resource Economics (non-ferrous, precious metals and petroleum products only).



rocks in some 80% of the continent are concealed by veneers of deeply weathered rocks or sedimentary strata. The weathering occurred particularly during the Mesozoic and Cainozoic periods (0.25 billion years to the present).

The Archaean and Proterozoic basement rocks, underlying most of the western two thirds of Australia, have been the source of much of the country's mineral wealth to date. Large deposits such as the gold mines of the Kalgoorlie region and the iron ore deposits of the Pilbara region (Western Australia); the base metal deposits at Broken Hill (New South Wales), Mount Isa (Queensland), McArthur River (Northern Territory); the copper-uranium-gold deposit at Olympic Dam (South Australia); and the uranium deposits of the Alligator Rivers area of the Northern Territory, all occur in the Precambrian rock. In eastern Australia, the major deposits are of Palaeozoic age and include the base metal deposits at Elura, Cobar, Woodlawn (New South Wales), Hellyer and Rosebery, the Mount Lyell copper-gold deposit, and the Renison tin deposit (Tasmania); and Kidston, Mount Leyshon (Queensland) and most other gold deposits. The large black coal deposits in New South Wales and Queensland are of upper Palaeozoic and Mesozoic age. Deposits formed in Tertiary times include the brown coal of Victoria; the oil shales of eastern Queensland; the bauxite of Weipa (Queensland), Gove (Northern Territory) and the Darling Ranges (Western Australia); the lateritic nickel deposits of Queensland and Western Australia; and the mineral sands deposits of the Murray Basin (Victoria).

The continuing discovery of world class deposits in both the established and new mineral provinces confirms Australia's high mineral potential. Major discoveries since 1990 include the Century (zinc), Cannington (lead, zinc, silver) and Ernest Henry (copper-gold) deposits in the major Carpentaria-Mount Isa base metal province, the Cadia (gold-copper) deposit in central western New South Wales, and the Bronzewing (gold) deposit in the Eastern Goldfields of Western Australia.

Australia's most important petroleum basins are under Bass Strait and off north-western Australia. Petroleum has been identified in Australian sediments as old as middle Proterozoic, but the main onshore petroleum accumulations are in sedimentary strata of middle Palaeozoic and younger ages and include the Bowen/Surat, Cooper/Eromanga, Otway and Perth Basins.

## Mineral exploration

Exploration consists of the search for new ore occurrences and undiscovered oil or gas, and/or appraisal intended to delineate or extend the limits of known deposits of minerals and oil or gas reservoirs by geological, geophysical, geochemical and other methods. This includes drilling, but excludes activities of a developmental or production nature. Exploration for water is excluded.

## Mineral exploration expenditure

Table 17.6 shows expenditure on private mineral exploration other than for petroleum in Australia during the last five years.

**17.6 PRIVATE MINERAL EXPLORATION EXPENDITURE (Other than for Petroleum)**

|                    | 1991-92      | 1992-93      | 1993-94      | 1994-95      | 1995-96      |
|--------------------|--------------|--------------|--------------|--------------|--------------|
| State              | \$m          | \$m          | \$m          | \$m          | \$m          |
| New South Wales    | 63.3         | 60.9         | 73.6         | 79.2         | 80.3         |
| Victoria           | 12.6         | 12.2         | 20.7         | 31.2         | 42.6         |
| Queensland         | 109.9        | 117.9        | 140.2        | 176.0        | 181.0        |
| South Australia    | 19.7         | 21.3         | 24.7         | 20.9         | 24.1         |
| Western Australia  | 332.8        | 348.1        | 453.7        | 495.5        | 519.5        |
| Tasmania           | 7.9          | 7.8          | 10.2         | 14.9         | 18.7         |
| Northern Territory | 57.8         | 63.5         | 69.5         | 75.8         | 93.9         |
| <b>Australia</b>   | <b>604.0</b> | <b>631.8</b> | <b>792.6</b> | <b>893.3</b> | <b>960.2</b> |

Source: Actual and Expected Private Mineral Exploration, Australia (8412.0).

## Drilling methods used in Australia

In 1996, the ABS collected information on methods used for exploration drilling for minerals in Australia.

Private sector companies drilled 10,388 thousand metres exploring for minerals and spent \$329m in direct drilling costs in Australia during 1995–96. This represents 34% of the total Australian mineral exploration expenditure of \$960m. Details of drilling methods during 1995–96 show that diamond drilling remained the method on which most expenditure occurred, \$139m or 42% of total expenditure.

Tables 17.7 and 17.8 show metres drilled and expenditure by drilling methods for all areas (including production leases and other areas) by State/Territory.

## Petroleum exploration expenditure

Petroleum exploration expenditure for all States and Territories for 1995–96 was \$725m, an increase of 6% compared with 1994–95. Expenditure on exploration in production leases increased 25%, while exploration in all other areas increased 12%.

Offshore exploration expenditure increased by 8% to \$550m and onshore exploration expenditure increased 2% to \$175m in 1995–96 compared with 1994–95.

Table 17.9 shows expenditure on private petroleum exploration in Australia during the last five years.

**17.7 TOTAL METRES DRILLED, By State/Territory — 1995–96**

|                     | NSW          | Vic.         | Qld            | SA           | WA             | Tas.        | NT           | Aust.           |
|---------------------|--------------|--------------|----------------|--------------|----------------|-------------|--------------|-----------------|
|                     | '000 metres  | '000 metres  | '000 metres    | '000 metres  | '000 metres    | '000 metres | '000 metres  | '000 metres     |
| Drilling method     |              |              |                |              |                |             |              |                 |
| Diamond             | 178.2        | 39.1         | 122.7          | n.p.         | 898.4          | n.p.        | n.p.         | 1 358.0         |
| Reverse circulation | 141.9        | 91.2         | 312.7          | n.p.         | 2 947.8        | n.p.        | 385.3        | 3 919.0         |
| Percussion          | 34.3         | 15.5         | 233.4          | n.p.         | n.p.           | n.p.        | n.p.         | 363.6           |
| Rotary air blast    | 100.5        | n.p.         | 428.2          | 90.4         | 3 028.1        | n.p.        | n.p.         | 4 027.5         |
| Other               | 68.7         | n.p.         | 22.5           | n.p.         | n.p.           | —           | n.p.         | 719.8           |
| <b>Total</b>        | <b>523.6</b> | <b>153.7</b> | <b>1 119.5</b> | <b>130.2</b> | <b>7 474.8</b> | <b>69.8</b> | <b>916.6</b> | <b>10 388.1</b> |

Source: Actual and Expected Private Mineral Exploration, Australia (8412.0).

**17.8 TOTAL DRILLING EXPENDITURE, By State/Territory — 1995–96**

|                     | NSW         | Vic.       | Qld         | SA         | WA           | Tas.       | NT          | Aust.        |
|---------------------|-------------|------------|-------------|------------|--------------|------------|-------------|--------------|
|                     | \$m         | \$m        | \$m         | \$m        | \$m          | \$m        | \$m         | \$m          |
| Drilling method     |             |            |             |            |              |            |             |              |
| Diamond             | 15.8        | 3.7        | 16.8        | n.p.       | 87.3         | n.p.       | n.p.        | 138.8        |
| Reverse circulation | 5.1         | 2.5        | 12.2        | n.p.       | 86.2         | n.p.       | 10.8        | 117.9        |
| Percussion          | 1.2         | 0.5        | 11.2        | n.p.       | n.p.         | n.p.       | n.p.        | 15.5         |
| Rotary air blast    | 1.3         | n.p.       | 7.1         | 0.9        | 32.7         | n.p.       | n.p.        | 46.9         |
| Other               | 1.2         | n.p.       | 0.4         | n.p.       | n.p.         | —          | n.p.        | 10.3         |
| <b>Total</b>        | <b>24.6</b> | <b>6.9</b> | <b>47.8</b> | <b>2.9</b> | <b>215.8</b> | <b>5.9</b> | <b>25.5</b> | <b>329.4</b> |

Source: Actual and Expected Private Mineral Exploration, Australia (8412.0).

**17.9 PRIVATE PETROLEUM EXPLORATION EXPENDITURE**

|              | 1991–92      | 1992–93      | 1993–94      | 1994–95       | 1995–96      |
|--------------|--------------|--------------|--------------|---------------|--------------|
|              | \$m          | \$m          | \$m          | \$m           | \$m          |
| Onshore      | 135.3        | 115.2        | 144.5        | r170.8        | 174.8        |
| Offshore     | 338.8        | 496.7        | 362.2        | r511.7        | 550.3        |
| <b>Total</b> | <b>473.9</b> | <b>611.9</b> | <b>506.7</b> | <b>r682.5</b> | <b>725.1</b> |

Source: Actual and Expected Private Mineral Exploration, Australia (8412.0).

## Overseas exploration

Australian resident companies spent \$486m exploring for minerals and petroleum overseas during 1995–96, 13% more than in 1994–95.

Expenditure on petroleum exploration was \$318m, which accounted for 65% of total overseas exploration expenditure in 1995–96. Exploration for gold was the next largest with \$101m (21%) of the total, followed by base metals with \$38m (8%).

The region in which most expenditure occurred was North America with \$136m (28%). This represents an increase of 53% on expenditure in this region during 1994–95. Exploration expenditure increased in Latin America, Papua New Guinea, Indonesia and other Asian countries. Expenditure in Africa remained constant, while in China expenditure dropped to \$2m, less than 10% of the 1994–95 expenditure in this region.

Table 17.10 shows overseas exploration expenditure for 1995–96. These results exclude the expenditures of Australian companies which explore exclusively overseas.

## Administrative and financial arrangements

### Mineral rights

Mineral rights in Australia are held by the State and Territory Governments, and the granting of exploration and mining titles is administered by them under the respective State or Territory legislation. The Commonwealth Government holds rights to minerals on Australia's continental shelf beyond coastal waters of the States and the Northern Territory, and certain prescribed substances in the Northern Territory, within the meaning of the Atomic Energy Act (principally uranium). The Commonwealth Government is also able to influence overall development and production activity in the mineral industry by virtue of its constitutional powers with respect to international trade, customs and excise, taxation and foreign investment, through established consultative mechanisms such as the Australian and New Zealand Minerals and Energy Council (ANZMEC), the Council of Australian Governments (COAG) and through initiatives for the enhancement of mineral provinces.

**17.10 OVERSEAS EXPLORATION EXPENDITURE OF AUSTRALIAN RESIDENT COMPANIES(a), 1995–96**

|                                                  | North<br>America(b) | Latin<br>America(c) | Papua<br>New<br>Guinea | Indonesia   | China      | Other<br>Asia | Africa      | Other       | Total        |
|--------------------------------------------------|---------------------|---------------------|------------------------|-------------|------------|---------------|-------------|-------------|--------------|
|                                                  | \$m                 | \$m                 | \$m                    | \$m         | \$m        | \$m           | \$m         | \$m         | \$m          |
| Petroleum                                        | n.p.                | n.p.                | 40.5                   | n.p.        | n.p.       | 19.0          | n.p.        | n.p.        | 317.9        |
| Copper, lead, zinc, silver, nickel<br>and cobalt | n.p.                | 14.7                | ..                     | 2.4         | n.p.       | 8.1           | n.p.        | n.p.        | 38.1         |
| Gold                                             | 8.0                 | 17.5                | 3.0                    | 35.6        | 0.4        | 27.6          | 5.3         | 3.3         | 100.7        |
| Iron ore                                         | ..                  | ..                  | ..                     | ..          | ..         | ..            | ..          | ..          | ..           |
| Mineral sands                                    | n.p.                | —                   | ..                     | ..          | ..         | 1.8           | n.p.        | n.p.        | 4.3          |
| Tin, tungsten, scheelite and<br>wolfram          | ..                  | ..                  | ..                     | ..          | ..         | ..            | ..          | ..          | ..           |
| Uranium                                          | ..                  | ..                  | ..                     | ..          | ..         | ..            | ..          | ..          | ..           |
| Coal                                             | ..                  | ..                  | ..                     | n.p.        | ..         | n.p.          | ..          | n.p.        | 2.7          |
| Construction materials                           | ..                  | ..                  | ..                     | ..          | ..         | n.p.          | ..          | ..          | n.p.         |
| Bauxite                                          | ..                  | ..                  | ..                     | ..          | ..         | ..            | ..          | ..          | ..           |
| Diamonds                                         | n.p.                | n.p.                | ..                     | n.p.        | n.p.       | n.p.          | 2.1         | n.p.        | 18.7         |
| Other(d)                                         | n.p.                | ..                  | ..                     | ..          | ..         | ..            | n.p.        | ..          | n.p.         |
| <b>Total</b>                                     | <b>136.0</b>        | <b>77.8</b>         | <b>43.5</b>            | <b>60.0</b> | <b>2.4</b> | <b>57.0</b>   | <b>56.9</b> | <b>52.4</b> | <b>486.0</b> |

(a) Excludes overseas subsidiaries of Australian resident companies. (b) Includes Canada. (c) Comprises Mexico, South America, Central America and the Caribbean. (d) Preliminary exploration where the commodity is not yet known.

Source: *Actual and Expected Private Mineral Exploration, Australia (8412.0)*.

## Mining and exploration for other than petroleum — legislation

### Onshore

Each State and Territory has its own Mining Act and Regulations governing the prospecting for and working of mineral deposits. These Acts and Regulations, although similar in principle, are different in detail.

Rights to explore for minerals are awarded by granting prospecting licences and (for larger areas) exploration licences or exploration permits. Each tenement is granted subject to conditions such as minimum exploration expenditure each year, methods of prospecting and the requirement for progressive relinquishment of area held. The tenure is usually limited. Most States and Territories make provision for a Miner's Right which permits an individual to prospect or fossick for minerals on Crown Land.

Following the 3 June 1992 decision by the High Court of Australia which held that the common law of Australia recognised a form of native land title, the Commonwealth enacted the *Native Title Act 1993*. The Act recognises and protects native title rights and establishes procedures to determine those rights and to ensure that those rights, where they continue to exist, are taken into account in future land management administration.

Existing rights held by non-Indigenous people are also protected by the Act. While the Act does not provide a veto over activities on Aboriginal land, it does enable Aboriginal people to negotiate in relation to proposed activities.

On 23 December 1996 the High Court released its decision in the Wik Case. The decision found that the grant of certain pastoral leases did not give the lessee exclusive possession of the leased areas and did not necessarily extinguish any native title that may be held in respect of those areas.

In May 1997 the Commonwealth Government released a 10 point plan as a policy framework for its legislative response to the Wik decision. It later released draft amendments to the Native Title Act for consultation and introduced revised amendments into the Federal Parliament in September 1997.

### Offshore

Following the enactment of the *Seas and Submerged Lands Act 1973*, the High Court confirmed that the Commonwealth has sovereignty over the territorial sea and sovereign rights over the resources of the whole of Australia's continental shelf. However, in the Offshore Constitutional Settlement between the Commonwealth and the States reached in June 1979, it was agreed that responsibility for mining of the seabed of coastal waters (i.e. the area landward of three nautical miles from the baseline of the territorial sea) should lie with the States and the Northern Territory and should be governed by their legislation, while the Commonwealth should have responsibility for areas beyond. The *Offshore Minerals Act 1994*, which replaced the *Minerals (Submerged Lands) Act 1981*, provides for the granting and administration of exploration and mining licences in those areas of sea covered by Commonwealth legislation.

## Petroleum mining and exploration — legislation

### Onshore

In Australia, full control of petroleum mining rights is vested with the relevant State or Territory Government. Any organisation or individual proposing to undertake petroleum exploration or development must first satisfy the relevant government that it has access to the necessary financial and technical resources to undertake the proposed operations.

### Offshore

The situation is the same as detailed above for mining exploration, with the Commonwealth having sovereignty, but administrative responsibility shared between the Commonwealth and the States; in the case of petroleum, under the *Petroleum (Submerged Lands) Act 1967*.

The offshore mining and exploration legislation provides for:

- exploration permits, providing exclusive exploration rights over a specific area; and
- production licences to authorise development and commercial production from discovered fields; and retention leases to allow security of tenure over discoveries not currently regarded as economic to develop.

Offshore projects, except in the area around the North West Shelf Gas Project, are subject to Petroleum Resource Rent Taxation (PRRT), as described below under *Secondary tax arrangements in the petroleum industry*.

The Timor Gap Zone of Co-operation Treaty designates an area of the Continental Shelf between Australia and Indonesia subject to control by a Joint Administration. Revenue collected from petroleum production taxation is shared between the two nations. The Treaty has provisions to prevent double taxation.

### Mineral royalties

Mineral resources are owned by the Crown in Australia, either by the State and Territory Governments, within their borders (and up to three nautical miles offshore), or by the Commonwealth Government in offshore areas outside the three nautical mile limit. Accordingly, royalties are collected by State and Territory Governments for mining onshore and up to three nautical miles offshore and by the Commonwealth outside that limit.

State royalties regulations vary in regard to types of royalties, rates levied and those commodities subject to royalties.

In recent years some State Governments have negotiated special royalty arrangements with companies which are seeking mineral leases for large-scale developments. These royalty rates may vary, depending on whether production is for export or for domestic processing. Examples of this type of royalty agreement are the Argyle Project in Western Australia and the Olympic Dam mine in South Australia. Mineral royalties received by governments in recent years are shown in table 17.11.

### Crude oil marketing and pricing arrangements

Refiners and producers are free to negotiate the quantities and prices of crude oil they buy and sell. Crude oil producers can export crude oil as an alternative to selling on the domestic market.

Decisions on major refinery investment associated with changes in domestic crude availability have led to a significant program of investment in upgraded plant and equipment.

The price of crude oil used for the purposes of excise tax assessment is the monthly volume-weighted average of realised prices of sales of oil from the area subject to excise.

### Pricing and export approval system for liquefied natural gas

The Commonwealth Government removed all controls on LNG exports in March 1997. Exports of Australian liquefied natural gas are now subject to international market forces.

### Secondary tax arrangements in the petroleum industry

In addition to general taxation arrangements applying to companies in Australia, petroleum production projects are subject to secondary taxes. The type and rate of secondary taxation (resource rent tax, resource rent royalty, or excise and royalties) depends on the location of the petroleum resource, the date of discovery of the petroleum reservoir and the date upon which production commenced.

17.11 MINERAL ROYALTY RECEIPTS BY GOVERNMENTS(a)

|                         | 1991-92           | 1992-93           | 1993-94           | 1994-95           | 1995-96          |
|-------------------------|-------------------|-------------------|-------------------|-------------------|------------------|
|                         | '000              | '000              | '000              | '000              | '000             |
| New South Wales         | r221 831          | r233 524          | r250 877          | r263 297          | 268 164          |
| Victoria(a)             | 62 600            | 57 527            | r48 564           | 49 586            | 47 430           |
| Queensland              | r263 843          | r303 497          | r301 876          | r301 798          | 339 531          |
| South Australia         | 71 767            | 71 344            | 61 114            | 52 509            | 57 273           |
| Western Australia       | r337 364          | r342 523          | r317 700          | r337 932          | 383 605          |
| Tasmania                | r37 540           | r37 022           | r40 754           | r47 288           | 51 639           |
| Northern Territory      | 28 265            | 14 942            | r28 673           | 25 848            | 22 909           |
| Commonwealth Government | r105 233          | r80 766           | r103 434          | r136 432          | 227 109          |
| <b>Total</b>            | <b>r1 128 443</b> | <b>r1 141 145</b> | <b>r1 152 983</b> | <b>r1 214 690</b> | <b>1 397 660</b> |

(a) Includes royalties on sand and gravel from Crown lands.

Source: Federal, State and Territory departments responsible for mining.

A profit based Petroleum Resource Rent Tax (PRRT) applies to petroleum projects in the majority of Australia's offshore areas beyond the State's territorial seas. The PRRT is levied at a rate of 40% of net revenues from successful projects which have recovered outlays, plus a threshold rate of return. The North West Shelf production licence areas and associated exploration permits are excluded. Where PRRT applies, it replaces excise and royalties which would otherwise have been levied.

A Resource Rent Royalty (RRR) may be applied to onshore petroleum projects by State Governments. Where RRR is applied the legislation provides for the Commonwealth to waive its crude oil excise whenever the relevant State Government negotiates an acceptable RRR agreement with the project producers and agrees to a satisfactory revenue sharing formula with the Commonwealth.

Excise applies to crude oil production from the North West Shelf projects offshore and from all onshore areas (except Barrow Island where a RRR applies).

Crude oil excise is based on the annual level of crude oil sales from individual production areas and is levied as a percentage of the realised price received by producers.

Different excise scales are applicable to oil production depending upon the date of discovery of the production area and the date when the area was first developed. The first 30 million barrels of crude oil production from a field are exempt from excise. Production beyond this level is subject to the appropriate excise rate.

Oil discovered before 18 September 1975 (old oil) attracts a higher rate of excise than oil discovered on or after this date (new oil). An intermediate scale also applies to oil produced from old oil fields that were not developed as at 23 October 1984. However, in the case of all onshore fields that commenced production after 1 July 1987, production in excess of 30 million barrels is subject to new oil excise.

A Commonwealth Royalty is also levied on offshore petroleum production from the North West Shelf project area. Proceeds are shared by the Commonwealth with Western Australia. Onshore petroleum rights are vested in the State and Northern Territory Governments and the Commonwealth does not, in general, receive a share of this royalty.

## Incentives to encourage petroleum exploration and development

Australia's full petroleum potential is yet to be determined. Government measures to encourage investment in the petroleum industry include:

- the offshore exploration strategy, which includes a program of regularly releasing exploration areas on which companies can bid;
- the Petroleum Resource Rent Tax (PRRT) reforms (see *Secondary tax arrangements in the petroleum industry*, above);
- development of a national gas strategy, which aims to free up domestic gas markets;
- deregulation of the crude oil and LPG markets, which removed controls on prices and restrictions on sale of these commodities within and outside Australia; and
- accelerated depreciation and investment allowance arrangements under company tax.

In the 1995 Budget the Commonwealth Government set the rate of company tax in Australia at 36%. This rate of taxation is significantly lower than the peak rate of 49% which applied during the 1987 and 1988 financial years.

## Administrative arrangements

The Commonwealth Minister for Primary Industries and Energy has portfolio responsibility for national energy policy matters, including the commercial development of hydrocarbon fuels and minerals. The Department of Primary Industries and Energy provides support for a number of advisory bodies including the Energy Research and Development Corporation, the Australian and New Zealand Minerals and Energy Council, the National Oil Supplies Advisory Committee, the National Petroleum Advisory Committee and the National Fuels Emergency Consultative Committee.

The Department is also responsible for the implementation of action required from Australia's membership of the International Energy Agency and for the national system of accounting for control of nuclear materials under Australia's Agreement with the International Atomic Energy Agency.



## Research

Research into exploration, mining, ore dressing and metallurgy is conducted by government bodies, universities, private enterprise, and by the combined efforts of all these. A summary of the main organisations and their functions follows.

### Australian Geological Survey Organisation (AGSO)

The Australian Geological Survey Organisation (AGSO), formerly called the Bureau of Mineral Resources, Geology and Geophysics, is Australia's national geoscientific agency.

AGSO's primary mission is to build a national geoscientific mapping effort to encourage the sustainable management of Australia's minerals, energy, land, ground water and ocean resources.

AGSO's role is to improve the quality, extent and accessibility of publicly available geoscience knowledge to enhance:

- the development of a more productive, competitive and diversified Australian mineral and petroleum exploration industry;
- the management of Australia's land, ground water and ocean resources consistent with sustainable development principles; and
- the development of effective strategies to mitigate the effects of natural geological hazards.

AGSO provides expert professional geoscientific advice on minerals, petroleum, land, ground water, coastal and marine issues and seismological and geological hazard analysis to support the development of management principles and land use strategies. AGSO also contributes to Commonwealth Government involvement in international geoscientific activities and development assistance programs, and actively pursues commercial geoscientific projects in collaboration with Australian industry and other organisations as appropriate.

AGSO's activities include regional mapping and analysis of major mineral provinces and petroleum basins; regional environmental mapping (including land resources such as soils and ground water); airborne magnetic and radiometric surveying; onshore and offshore seismic surveying; the operation of geophysical observatories; and the development of an accessible national geoscience information system.

### Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Research and development activities of the CSIRO are designed to play a major contributing role in the development of sustainable and competitive minerals and energy industries in Australia.

This is achieved by the provision of research, development and service capabilities to support existing and emerging industries as well as providing for the next generation of technology, products and processes. At the same time the CSIRO endeavours to bring about safe and ecologically sustainable development through research and advice on environmental issues related to client industries. By working closely with industry, government and other organisations, the CSIRO helps transform research outcomes into new or improved business opportunities.

Minerals research by the CSIRO is undertaken as part of the work program of Divisions operating within the sectors of the Minerals and Energy Alliance.

See *Chapter 25, Science and technology* for more information on the CSIRO.

### Australian Mineral Industries Research Association Limited

The Association provides high quality development and management of jointly funded research projects for the benefit of the Association's members. Membership includes all the largest Australian mineral and coal companies, smaller exploration companies, and suppliers of services to the industry. It sustains an active involvement in four Co-operative Research Centres and was appointed in 1992 to manage the Australian Coal Association Research Program.

### Australian Bureau of Agriculture and Resource Economics

Established originally as the Bureau of Agricultural Economics, the Australian Bureau of Agricultural and Resource Economics (ABARE) is the largest applied economic research agency in Australia undertaking research into commodities. ABARE was formed by the combination of the former Bureaus of Agricultural Economics and Resource Economics in 1987.

ABARE undertakes specific research projects on behalf of a wide range of clients and deals directly with a variety of industry groups, Australian and international agencies and research organisations, and Commonwealth and State government departments.

ABARE services include:

- deriving supply and demand projections;
- assessing the outlook for commodity prices;
- examining patterns of national and world production and consumption;
- analysing the impact of economic policies;
- developing analytical computer programs and economic policies;
- undertaking regional and environmental economic assessments; and
- providing economic assessments of factors affecting the competitiveness of the economic sector.

The organisation is based on three research groups:

- Agriculture;
- Minerals, Energy and Resources; and
- Environment and Trade.

ABARE undertakes economic research on issues affecting the full range of major minerals, energy, agricultural and natural resources industries, as well as on climate change, and including macroeconomic, microeconomic and trade issues relating to these industries.

### **Bureau of Resource Sciences (BRS)**

BRS is one of three professionally independent specialist bureaus within the Commonwealth Department of Primary Industries and Energy. It provides scientific analyses and advice on

minerals, agriculture, forestry, fisheries, petroleum, residues, and animal and plant health to support the sustainable competitive growth of Australia's resource based industries.

The Mineral Resources and Energy Branch is one of eight Branches within BRS. It provides expert scientific analyses and technical advice on mineral and energy resources and mining, mineral resource potential, exploration, multiple land use and the sustainable development of mineral resources, energy efficiency and greenhouse gas emissions.

The Branch also maintains two large national databases which are accessed by Commonwealth and State government departments, the mining industry and the wider community. The mineral occurrence location database (MINLOC) contains information on more than 50,000 Australian mineral occurrences, and MINRES, a mineral resources database, contains comprehensive information on the mineral resources of some 1,500 Australian mineral deposits.

Key outcomes during 1996–97 included the release of *Australia's Identified Mineral Resources 1995*, contributions to the design of the proposed linked database for the APEC Group of Experts on Minerals and Energy Exploration and Development; completion of assessments of the potential mineral resources of Tasmania, the Central Highlands of Victoria and South West region of Western Australia; and the completion of a resource assessment, drilling database and Geographic Information System (GIS) for Christmas Island.

The Branch leads BRS's multi-disciplinary project on greenhouse science and leads corporate activities aimed at optimising the use of microcomputer-based Geographic Information Systems.



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### Other publications

Other organisations which produce statistics in this field include the Australian Bureau of Agricultural and Resource Economics, the Department of Primary Industries and Energy, the Joint Coal Board and the Australian Institute of Petroleum. State Government departments and instrumentalities also are important sources of energy data, particularly at the regional level, while a number of private corporations and other entities operating within the mining and energy fields also publish or make available a significant amount of information.



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## Introduction

Energy is a fundamental element of Australia's economy and society. The vast energy resources in Australia, along with other natural resources, are an important part of the nation's wealth. Australia's energy sector is involved with all major industries, through energy production, conversion, transformation and distribution, and energy consumption. Historically, Australia has been one of the world's major net exporters of energy. In 1996–97 export of energy products accounted for 17% of total export income.

The major energy forms used or produced in Australia are non-renewable fuels such as petroleum (crude oil and natural gas), coal (black coal and brown coal), uranium, and renewable energy products such as biomass (wood fuel and bagasse), hydro, wind and solar energy. Electricity is not a naturally occurring energy form, being generated from other primary energy forms. In Australia, about 90% of electricity is generated from fossil fuels and about 10% from hydro-power stations. Up to 1995–96, public electricity networks supplied over 8 million customers from residential, commercial, industrial and other sectors.

To meet the domestic and export demand, Australian energy production has tripled over the last 20 years. Energy consumption has increased by 65% since 1975–76. This reflects Australia's economic and population growth, and particularly the trend towards energy

intensive industries such as aluminium production, which now accounts for 20% of total production in countries of the Organisation for Economic Co-operation and Development (OECD). In 1995–96 the net export of energy was about 13 times that experienced in 1975–76. Australia plays a significant part in the international energy market.

Table 18.1 provides a comparison of energy production, import and consumption in 1994 for selected countries. The United States accounted for 19.3% of the world's total production and 23.8% of the world's total energy consumption. Canada contributed 3.9% of total production, United Kingdom 2.8%, Japan 1.0% and Netherlands 0.8%. In energy consumption, Canada accounted for 2.7% of the world's total consumption, the United Kingdom 2.6%, Japan 5.6% and the Netherlands 0.8%. Australia accounted for 2.0% of the world's total production, but only about 0.8% of total energy consumption.

In recent years there has been increasing international recognition that the energy sector is undergoing significant changes. Greenhouse gas emissions are one of the top issues of environmental concern relating to energy uses. New directions and policies in micro-economic reform indicate the need to improve energy efficiency at the industry level and to develop alternatives to traditional energy forms and methods of energy generation and use. Table 18.2 lists key indicators that reflect issues related to energy use for selected countries in 1994.

**18.1 ENERGY PRODUCTION AND CONSUMPTION FOR SELECTED COUNTRIES, 1994**

|                    | Unit     | Australia | Canada | Japan | Netherlands | United Kingdom | United States | World   |
|--------------------|----------|-----------|--------|-------|-------------|----------------|---------------|---------|
| Primary production | (a) mtoe | 174.0     | 337.7  | 89.3  | 66.3        | 239.3          | 1 651.3       | 8 578.0 |
| Solids             | %        | 71.4      | 11.7   | 4.3   | 0.0         | 11.7           | 32.4          | 25.0    |
| Oil                | %        | 14.9      | 32.1   | 0.9   | 6.6         | 53.9           | 23.9          | 38.2    |
| Natural gas        | %        | 12.9      | 36.7   | 2.2   | 90.3        | 24.3           | 26.6          | 20.1    |
| Nuclear            | %        | 0.0       | 8.3    | 78.5  | 1.5         | 9.5            | 10.7          | 6.8     |
| Hydro & wind       | %        | 0.8       | 8.4    | 6.5   | 0.0         | 0.2            | 1.4           | 2.4     |
| Geothermal         | %        | 0.0       | 0.0    | 2.7   | 0.0         | 0.0            | 0.9           | 0.5     |
| Other(b)           | %        | 0.1       | 2.8    | 4.8   | 1.5         | 0.4            | 4.0           | 7.0     |
| Net imports        | mtoe     | -82.4     | -105.7 | 403.0 | 17.2        | -29.2          | 445.5         | (c) 9.0 |
| Final consumption  | mtoe     | 64.2      | 229.7  | 481.9 | 70.7        | 219.6          | 2 038.0       | 8 570.0 |
| Solids             | %        | 15.7      | 10.8   | 16.4  | 12.5        | 22.0           | 23.2          | 25.2    |
| Oil                | %        | 50.3      | 33.6   | 55.9  | 36.2        | 38.9           | 38.7          | 38.1    |
| Natural gas        | %        | 15.1      | 28.5   | 10.6  | 47.2        | 27.4           | 24.1          | 20.0    |
| Other              | %        | 18.8      | 27.0   | 17.1  | 4.1         | 11.7           | 14.0          | 16.6    |

(a) mtoe — million tonnes of oil equivalent, defined as 107 kilocalories. (b) Includes nuclear, hydro and wind, and other energy sources. (c) Corresponds to statistical errors.

Source: International Energy Agency, 1996; European Commission, 1996.

## 18.2 KEY INDICATORS OF ENERGY USE FOR SELECTED COUNTRIES, 1994

|                                     | Unit            | Australia | Canada | Japan   | Netherlands | United Kingdom | United States | World    |
|-------------------------------------|-----------------|-----------|--------|---------|-------------|----------------|---------------|----------|
| Energy intensity                    | mtoe/mecu(a)    | 332.3     | 414.9  | 207.9   | 337.2       | 298.5          | 307.7         | 414.0    |
| Energy consumption per capita       | mtoe/inhabitant | 5.3       | 7.9    | 3.9     | 4.6         | 3.8            | 7.8           | 1.5      |
| Energy dependency                   | %               | -85.0     | -45.9  | 82.5    | 21.0        | -13.1          | 21.6          | n.a.     |
| CO <sub>2</sub> emission            | mill. t         | 274.8     | 426.7  | 1 081.5 | 200.6       | 556.9          | 5 006.1       | 20 404.0 |
| CO <sub>2</sub> emission per capita | t/inhabitant    | 15.4      | 14.7   | 8.7     | 13.0        | 9.5            | 19.2          | 3.7      |

(a) Million tonnes of oil equivalent, defined as 107 kilocalories/Million European Currency Units at 1985 value.

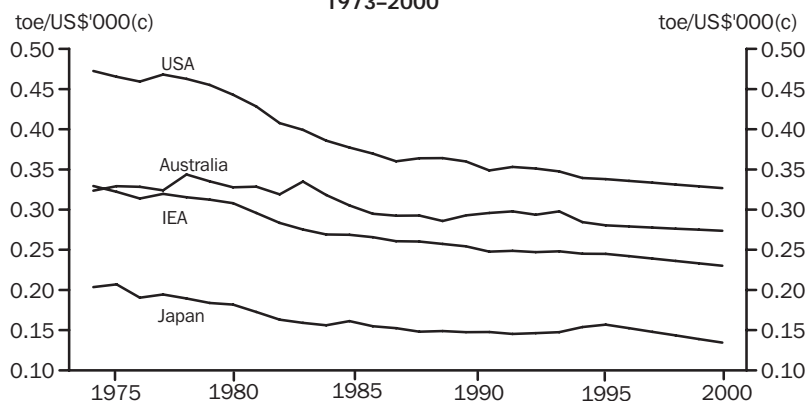
Source: International Energy Agency, 1996.

Energy intensity is a measure of efficiency. This can be presented in a variety of ways. One measure of the energy intensity for Australia is the total energy used in Australia (in petajoules) divided by Gross Domestic Product (GDP, measured in Aust\$m). Using this measure, an indicator of improvement in energy efficiency would be a fall in the absolute value of energy intensity (PJ/Aust\$m). Two examples of this would be: the level of economic activity and sectoral composition remaining the

same, but less energy being used; and more production for the same amount of energy used.

Graph 18.3 shows the trend of energy intensity for Australia, Japan, the United States and all International Energy Agency (IEA) countries. The graph uses a measure of energy intensity based on the supply of primary energy (in tons of oil equivalent) as the numerator and GDP measured in \$US '000 as the denominator.

18.3 ENERGY INTENSITY FOR SELECTED COUNTRIES, TPES/GDP(a)(b)  
1973-2000



(a) Total primary energy supply. (b) 1990 prices and exchange rates. (c) Tonnes of oil equivalent.  
Source: International Energy Agency, Energy Balances of OECD Countries; OECD, National Accounts of OECD Countries (Paris, OECD) and country submissions.

## Energy resources

Australia is well endowed with energy resources, in both renewable and non-renewable forms.

The abundant black coal resources in Australia account for about 8% of the world's total. Brown coal resources account for about 15%. Uranium resources in Australia are regarded as among the largest sources of low-cost uranium in the world. The Ranger mine in the Northern Territory is ranked as one of the largest uranium mines in production. Although crude oil and condensate resources are limited, Australia has discovered vast natural gas resources. Natural gas production not only supplies enough for domestic demands but also produces sufficient quantities for export markets.

There is great potential for the use of renewable energy resources in Australia. Hydro-electricity accounts for 10% of total public electricity generation. The use of wood fuels and bagasse (the residual of sugar cane) has increased by about 34% in the past 20 years, particularly bagasse which has increased about 60% in the same period. With development of modern technology, the use of solar and wind energy has also increased. Australia has vast solar and wind energy resources of high quality, which are regarded as good options for electricity generation, and space and water heating, especially for remote areas. These options are

considered to have less detrimental impact on the environment, as well as having low operational costs.

In the world's energy market, Australia plays an important role as:

- the world's largest exporter of black coal;
- a major uranium producer and exporter; and
- a major producer and exporter of liquefied natural gas (LNG).

Australia is currently one of only a few countries in the OECD which are net energy exporters (others include Canada, Norway and the United Kingdom).

Table 18.4 presents the estimates of Australia's identified energy resources and production in physical units. At current production levels, the estimated life spans of demonstrated economic resources vary significantly. Without considering land use constraints, enough brown coal exists for over 800 years production, while crude oil and condensate resources may last less than two decades if used at current production levels. Black coal resources have an estimated life span of over two hundred years and uranium a life span of over one hundred years. With the exception of crude oil and condensate, Australia's energy resources are well placed for future economic development.

**18.4 AUSTRALIA'S IDENTIFIED ENERGY RESOURCES**

|               | Unit | Demonstrated resources |             | Inferred resources | Production 1995–96 |
|---------------|------|------------------------|-------------|--------------------|--------------------|
|               |      | Economic               | Subeconomic |                    |                    |
| Black coal(a) | Gt   | 49                     | 6           | very large         | 0.20               |
| Brown coal(a) | Gt   | 41                     | 3           | 165                | 0.05               |
| Petroleum(b)  |      |                        |             |                    |                    |
| Crude oil(c)  | Gl   | 382                    | 106         | n.a.               | 30.26              |
| Natural gas   | Tl   | 950                    | 1 088       | n.a.               | 30.07              |
| LPG(d)        | Gl   | 131                    | 83          | n.a.               | 3.65               |
| Shale oil     | Gl   | —                      | 4 564       | 40 468             | —                  |
| Uranium       | kt   | 629                    | 77          | n.a.               | 4.33               |

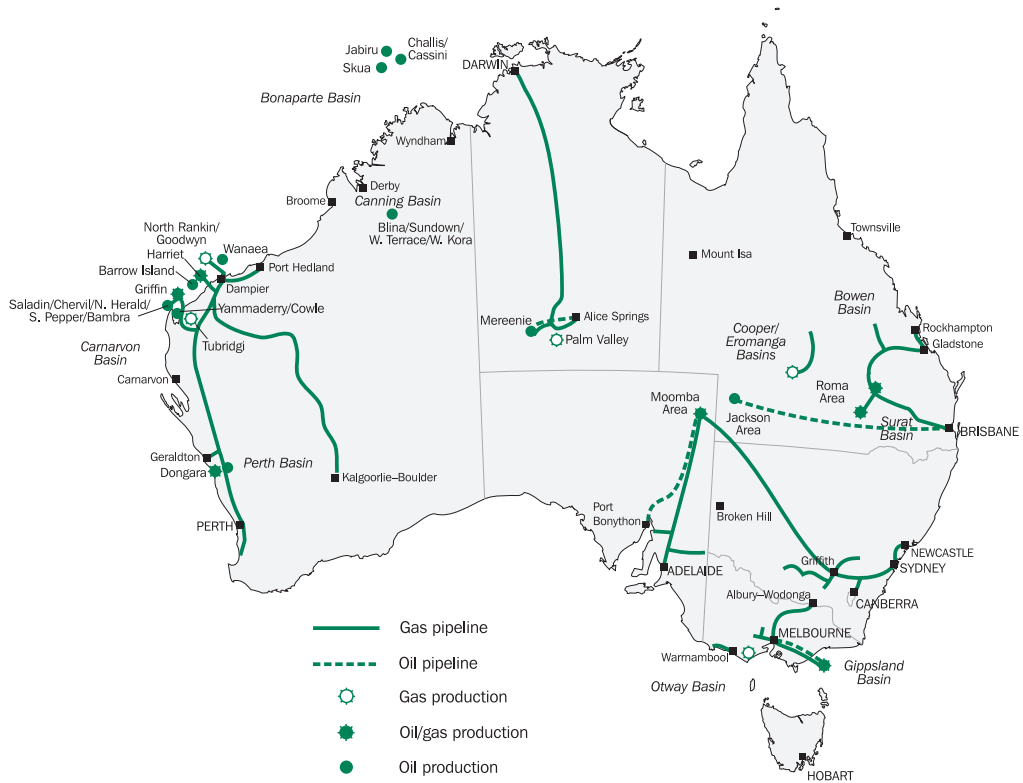
(a) As at 1995. (b) 1 December 1994. (c) Includes condensates. (d) Naturally occurring.

Source: Bureau of Resource Sciences; Australian Bureau of Agricultural and Resource Economics, 1997.

Most petroleum originates from organic matter buried within sedimentary rocks by the action of heat and pressure through biochemical process. Over the last 35 years, Australia has discovered petroleum resources within 14 sedimentary basins in Western Australia, Queensland, Victoria and the Northern Territory. Map 18.5 shows the 'major fields' (each of which contains more than 16 gigalitres or 100 million barrels of oil and condensate) of Australia's petroleum resources. The largest are the Bass Strait and Carnarvon Basin oil and gas fields.

Uranium is an abundant mineral in the earth's crust, but it is rare to discover rich uranium deposits that are economically viable for mining. Australia's uranium resources, at the cost of US\$80 per kilogram of uranium, are the largest from within the countries of the former western world. Map 18.6 shows Australia's uranium deposits and prospects. Ranger is the largest uranium mine in Australia with a capability of 3,000 tonnes uranium oxide per year.

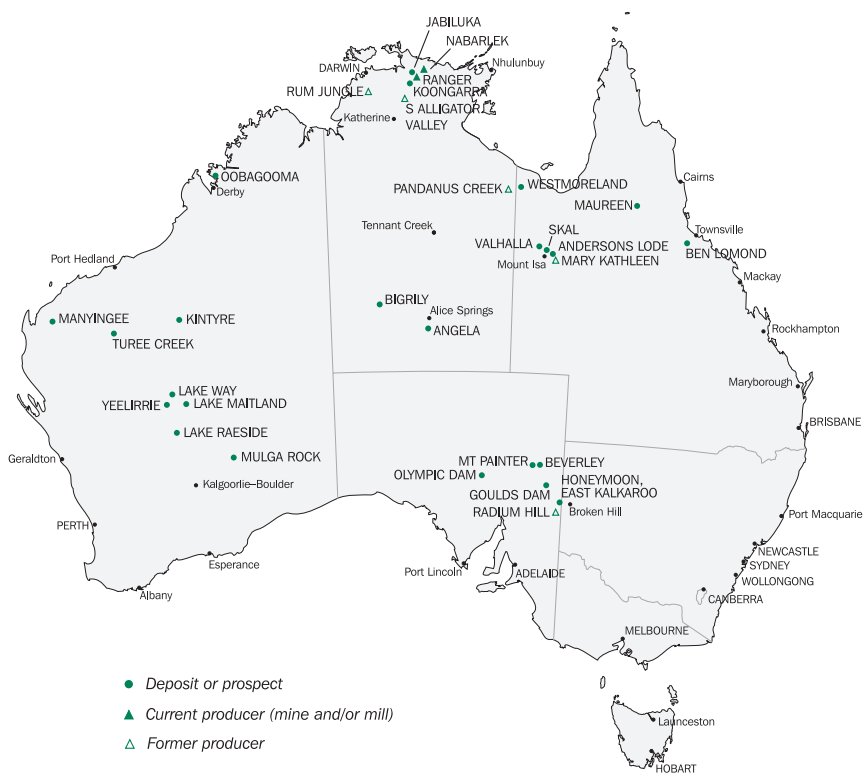
18.5 AUSTRALIA'S PETROLEUM RESOURCES



Source: Bureau of Resource Sciences, 1996.



18.6 AUSTRALIA'S URANIUM RESOURCES



Source: McKay, Mieziitis & Lambert, 1995.

Table 18.7 presents Australia’s energy production in energy units. Black coal accounted for 49% of total energy production. This proportion has remained about the same for the past 20 years. The net increase of black coal production was 142 million tonnes during the period of 1973–74 to 1995–96. Uranium accounted for the second highest energy production, contributing 22% of the total. Its production has increased 86% over the last two years. This mainly resulted from completion of major expansion of uranium production in both the Ranger and Olympic Dam mines and the stimulation of the continuing growth of demand in the international uranium market. In 1995–96, natural gas contributed about 11% of total energy production while crude oil contributed 10%. Australia’s natural gas production has been increasing rapidly for the last two decades, from 4.4 giga litres in 1973–74 to 29.9 giga litres in 1995–96. This was due to the establishment of production capacity, pipeline networks and export facilities, as well as the growth

of domestic and export markets. Renewable energy made up about 2% of total energy products. Total energy production increased 20% over the last two years. New South Wales and Queensland together produced 96% of black coal, and Western Australia and Victoria produced 88% of crude oil and 73% of natural gas.

| 18.7 ENERGY PRODUCTION FROM NON-RENEWABLE FUELS, 1995–96 |                 |              |
|----------------------------------------------------------|-----------------|--------------|
|                                                          | Petajoules      | %            |
| Black coal                                               | 5 279.0         | 48.6         |
| Brown coal                                               | 522.0           | 4.8          |
| Uranium                                                  | 2 399.4         | 22.0         |
| Crude oil                                                | 1 120.3         | 10.3         |
| Natural gas                                              | 1 200.8         | 11.0         |
| LPG                                                      | 96.7            | 0.9          |
| Renewables                                               | 258.3           | 2.4          |
| <b>Total</b>                                             | <b>10 877.1</b> | <b>100.0</b> |

Source: Bush, Harris & Ho Trieu, 1997.

## 18.8 EXPORTS OF ENERGY PRODUCTS

|                                                                  | 1994-95       |             | 1995-96       |             | 1996-97       |             |
|------------------------------------------------------------------|---------------|-------------|---------------|-------------|---------------|-------------|
|                                                                  | Total exports |             | Total exports |             | Total exports |             |
|                                                                  | \$m           | %           | \$m           | %           | \$m           | %           |
| Coal, whether or not pulverised but not agglomerated             | 6 888         | 10.3        | 7 775         | 10.2        | 7 958         | 10.1        |
| Petroleum oils and oils obtained from bituminous minerals, crude | 1 644         | 2.5         | 1 593         | 2.1         | 1 883         | 2.4         |
| Petroleum products                                               | 1 305         | 2.0         | 1 596         | 2.1         | 1 922         | 2.4         |
| Gas, natural and manufactured                                    | 1 355         | 2.0         | 1 562         | 2.1         | 1 895         | 2.4         |
| Ores and concentrates of uranium or thorium                      | 188           | 0.3         | 242           | 0.3         | 245           | 0.3         |
| <b>Total</b>                                                     | <b>11 380</b> | <b>17.1</b> | <b>12 768</b> | <b>16.8</b> | <b>13 903</b> | <b>17.6</b> |

Source: *International Merchandise Trade, Australia* (5422.0).

The value of Australia's energy exports has increased by 22% in the last three years, as shown in table 18.8. The export of energy products accounted for about 17% of the total value of Australia's exports over the three years 1994-95 to 1996-97. Black coal accounted for about 10%, and crude oil, petroleum products and gas were about 2% each. The ores and concentrates of uranium and thorium are reported jointly at about 0.3%. Over the last 20 years the export of natural gas has experienced substantial growth as a result of the industry's increased production capacity of LNG. Crude oil has also increased substantially, reflecting a result of the deregulation of the oil industry in the mid-1980s.

## Energy end use in Australia

An overview of Australia's energy sector can be presented in the form of energy flow, as shown in table 18.9. This consists of three components: energy supply, conversion and end use. Following the IEA definition, domestic energy supply consists of total domestic energy production, import and export, and stock changes. Primary energy products flow into the energy conversion industry, which produces secondary forms of energy products, such as electricity. During the conversion, transmission and distribution processes, a certain amount of energy is consumed or lost. A significant part of primary energy, in conjunction with the energy products generated as secondary forms, flows into all other sectors of Australian industries, and is termed 'energy end use'. This can also be referred to as 'final energy consumption' and is a crucial factor in deciding the energy demand of the domestic market, energy efficiency, and greenhouse and air pollutant emissions.

In table 18.9, the flow data cover the period 1988-89 to 1995-96, and are provided in terms of energy units. Energy production accounted for 10,877 petajoules in 1995-96 and net export of energy (exports minus imports) was 6,413 petajoules. After taking account of the stock change and statistical discrepancies, the total domestic energy supply was 4,495 petajoules. The energy conversion industry consumed 32% of the total domestic supply. Energy end use in this year was about 3,068 petajoules.

Table 18.9 also shows the steady upward trend of energy supply, conversion and end use. During the period 1988-89 to 1995-96, energy production increased about 27%, energy consumption in the conversion industry increased about 14%, and energy end use increased about 18%. The growth in energy consumption is estimated to be about 2.5% a year.

As expected, energy consumption varies significantly across industries. In 1995-96 electricity generation consumed 27% of total energy used, with annual growth at about 4%. Transport accounted for 26.2% and manufacturing 25.6% of total energy consumption. The mining industry has the highest growth rate of energy consumption, averaging about 6.3% increase per year. For the residential sector, the proportion of total energy consumed has remained steady over the last 20 years, at about 8%. Considering the overall increase in energy used by all industries, this represents an average annual growth rate of 2%.

## 18.9 FLOW TABLE FOR ENERGY SUPPLY, CONVERSION AND CONSUMPTION

|                        | 1988–89        | 1989–90        | 1990–91        | 1991–92        | 1992–93        | 1993–94        | 1994–95        | 1995–96        |
|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                        | petajoules     | petajoules     | petajoules     | petajoules     | petajoules     | petajoules     | petajoules     | petajoules     |
| SUPPLY                 |                |                |                |                |                |                |                |                |
| Production             | 8 570.6        | 8 923.8        | 9 299.4        | 9 603.2        | 8 981.0        | 9 035.7        | 9 590.8        | 10 877.1       |
| Imports                | 619.7          | 625.6          | 625.2          | 672.8          | 860.4          | 890.9          | 925.3          | 1 046.5        |
| Exports                | -5 584.2       | -5 257.4       | -6 785.8       | -6 517.7       | -5 584.0       | -6 414.1       | -6 771.1       | -7 459.8       |
| Stock change(a)        | 225.9          | -346.4         | 807.9          | 245.5          | -178.4         | 661.6          | 619.3          | 31.3           |
| <b>Total supply</b>    | <b>3 832.1</b> | <b>3 945.2</b> | <b>3 946.6</b> | <b>4 003.2</b> | <b>4 079.2</b> | <b>4 174.2</b> | <b>4 363.5</b> | <b>4 495.1</b> |
| CONVERSION             |                |                |                |                |                |                |                |                |
| Coke ovens             | 50.9           | 29.8           | 36.0           | 36.0           | 31.9           | 28.9           | 24.5           | 24.5           |
| Briquetting            | 0.3            | 0.3            | 0.3            | 0.5            | 0.2            | 0.5            | 0.3            | 0.3            |
| Petroleum refining     | 11.7           | 13.9           | 13.3           | 13.2           | 13.2           | 13.6           | 13.2           | 15.5           |
| Gas manufacturing      | 0.2            | 0.3            | 0.4            | 0.8            | 0.7            | 0.3            | 0.4            | 0.7            |
| Electricity generation | 973.4          | 991.0          | 993.2          | 1 020.0        | 1 019.9        | 1 045.8        | 1 082.3        | 1 130.4        |
| Other conversion       | 28.8           | 61.6           | 60.3           | 55.8           | 41.2           | 43.0           | 49.4           | 52.0           |
| Own fuel use           | 181.6          | 181.2          | 180.8          | 184.2          | 189.3          | 188.2          | 199.9          | 203.4          |
| Total conversion       | 1 246.9        | 1 278.1        | 1 284.3        | 1 310.5        | 1 296.4        | 1 320.3        | 1 370.0        | 1 426.8        |
| <b>Net supply(b)</b>   | <b>2 585.0</b> | <b>2 667.1</b> | <b>2 662.5</b> | <b>2 693.5</b> | <b>2 783.6</b> | <b>2 853.5</b> | <b>2 994.2</b> | <b>3 068.4</b> |
| END USE                |                |                |                |                |                |                |                |                |
| Agriculture            | 58.1           | 57.6           | 58.4           | 58.5           | 60.3           | 62.3           | 64.8           | 65.4           |
| Mining                 | 130.7          | 162.8          | 167.8          | 173.5          | 192.3          | 196.1          | 215.8          | 231.8          |
| Iron and steel         | 97.5           | 99.1           | 95.7           | 90.9           | 95.7           | 96.3           | 103.1          | 97.1           |
| Chemical               | 126.1          | 129.8          | 132.9          | 135.7          | 128.6          | 130.1          | 141.7          | 155.8          |
| Other industry         | 638.8          | 645.1          | 642.6          | 643.4          | 657.5          | 679.0          | 697.7          | 697.4          |
| Construction           | 41.5           | 41.0           | 37.2           | 38.7           | 41.6           | 42.8           | 44.3           | 46.5           |
| Road transport         | 792.8          | 808.9          | 791.3          | 801.4          | 828.8          | 849.9          | 875.9          | 900.4          |
| Rail transport         | 31.1           | 30.7           | 30.5           | 31.1           | 29.4           | 29.5           | 28.4           | 28.9           |
| Air transport          | 114.2          | 109.4          | 122.7          | 131.0          | 140.1          | 145.3          | 163.0          | 176.3          |
| Water transport        | 60.1           | 56.3           | 49.1           | 48.8           | 45.6           | 47.7           | 62.6           | 64.5           |
| Commercial             | 141.7          | 150.8          | 156.4          | 157.8          | 164.5          | 169.1          | 179.9          | 185.1          |
| Residential            | 302.0          | 323.0          | 328.6          | 334.4          | 347.1          | 349.3          | 359.5          | 360.4          |
| Others(c)              | 50.4           | 52.7           | 49.3           | 48.3           | 52.1           | 56.0           | 58.0           | 59.0           |
| <b>Consumption</b>     | <b>2 585.0</b> | <b>2 667.1</b> | <b>2 662.5</b> | <b>2 693.5</b> | <b>2 783.6</b> | <b>2 853.5</b> | <b>2 994.2</b> | <b>3 068.4</b> |

(a) Includes discrepancies. (b) After conversion, industrial sector use and losses. Equals total final energy consumption.

(c) Includes lubricants, greases, bitumen and solvents.

Source: Australian Bureau of Agricultural and Resource Economics, 1997.

Tables 18.10 to 18.13 provide more detailed information about the electricity and gas industries. In 1995–96 the total number of electricity customers increased from 7.92 million to 8.07 million and the total number of natural gas customers increased from 2.80 million to 2.95 million. New South Wales and Victoria accounted for 59% of the total electricity customers while Victoria had 46% of natural gas

customers. In terms of energy consumption, New South Wales consumed 36% of total electricity, Victoria 23%, Queensland 19%, Western Australia 8%, and the remaining States and Territories totalled about 15%. For natural gas consumption, Victoria accounted for 46% of the total, New South Wales 26%, Western Australia 13%, South Australia 11% and the rest about 4%.

**18.10 ELECTRICITY, Number of Customers — 30 June 1996**

|                 | NSW              | Vic.             | Qld              | SA             | WA             | Tas.           | NT            | ACT            | Aust.            |
|-----------------|------------------|------------------|------------------|----------------|----------------|----------------|---------------|----------------|------------------|
| Residential     | 2 401 033        | 1 763 026        | 1 262 654        | 622 292        | 632 278        | 200 925        | 51 252        | 114 778        | 7 048 238        |
| Commercial      | 305 565          | 180 262          | 194 580          | 55 797         | 91 716         | 34 391         | 10 015        | 11 949         | 1 011 372        |
| Industrial      | (a)              | 88 296           | (a)              | 31 254         | 1 284          | 6 263          | (a)           | (a)            | (a)              |
| Traction        | (a)              | 20               | (a)              | 1              | —              | —              | —             | —              | 21               |
| Public lighting | 1 448            | 3 980            | 130              | 1 706          | 152            | 239            | 38            | 3              | 7 696            |
| <b>Total</b>    | <b>2 708 046</b> | <b>2 035 584</b> | <b>1 457 364</b> | <b>711 050</b> | <b>725 430</b> | <b>241 818</b> | <b>61 305</b> | <b>126 730</b> | <b>8 067 327</b> |

(a) Included in 'Commercial' category.

Source: Electricity Supply Association of Australia.

**18.11 ELECTRICITY CONSUMPTION, Year Ended 30 June 1996(a)**

|                 | NSW           | Vic.          | Qld           | SA           | WA            | Tas.         | NT           | ACT          | Aust.          |
|-----------------|---------------|---------------|---------------|--------------|---------------|--------------|--------------|--------------|----------------|
|                 | million kWh   | million kWh   | million kWh   | million kWh  | million kWh   | million kWh  | million kWh  | million kWh  | million kWh    |
| Residential     | 16 470        | 9 453         | 7 938         | 3 384        | 2 947         | 1 829        | 356          | 1 037        | 43 414         |
| Commercial      | 34 680        | 8 283         | 19 561        | 2 273        | 8 048         | 764          | 985          | 1 211        | 99 652         |
| Industrial      | (b)           | 14 559        | (b)           | 3 448        | (b)           | 5 840        | (b)          | (b)          | (b)            |
| Traction        | (b)           | 341           | (b)           | 2            | —             | —            | —            | —            | 343            |
| Public lighting | 261           | 246           | 143           | 78           | 80            | 21           | 15           | 39           | 883            |
| <b>Total</b>    | <b>51 411</b> | <b>32 883</b> | <b>27 642</b> | <b>9 184</b> | <b>11 075</b> | <b>8 454</b> | <b>1 357</b> | <b>2 287</b> | <b>144 291</b> |

(a) Figures do not include internal usage by supply authorities or consumption on unread meters at 30 June. (b) See the figure for 'Commercial'. One figure is given to include both 'Commercial' and 'Industrial'.

Source: Electricity Supply Association of Australia.

**18.12 NATURAL GAS OPERATIONS OF UTILITIES, Number of Customers — 1995-96**

|              | NSW(a)         | Vic.             | Qld            | SA             | WA             | Tas.(b)  | NT         | ACT           | Aust.            |
|--------------|----------------|------------------|----------------|----------------|----------------|----------|------------|---------------|------------------|
| Residential  | 676 656        | 1 308 341        | 120 714        | 309 073        | 357 309        | —        | 138        | 54 545        | 2 826 776        |
| Commercial   | 22 460         | 36 886           | 3 922          | 6 781          | 6 485          | —        | 54         | 1 387         | 77 975           |
| Industrial   | 1 827          | 4 187            | 544            | 1 284          | 236            | —        | —          | 41            | 8 119            |
| <b>Total</b> | <b>700 943</b> | <b>1 349 414</b> | <b>125 180</b> | <b>317 138</b> | <b>364 030</b> | <b>—</b> | <b>192</b> | <b>55 973</b> | <b>2 912 870</b> |

(a) Excludes the ACT but includes Albury. (b) Natural Gas not available in Tasmania.

Source: Australian Gas Association, Annual Survey of Distributors, Pipeliners and Producers.

**18.13 NATURAL GAS OPERATIONS OF UTILITIES, Consumption — 1995-96**

|              | NSW(a)        | Vic.           | Qld           | SA            | WA            | Tas.(b)    | NT         | ACT          | Aust.          |
|--------------|---------------|----------------|---------------|---------------|---------------|------------|------------|--------------|----------------|
|              | Terajoules    | Terajoules     | Terajoules    | Terajoules    | Terajoules    | Terajoules | Terajoules | Terajoules   | Terajoules     |
| Residential  | 14 469        | 76 444         | 1 496         | 7 314         | n.p.          | —          | 2          | 2 448        | —              |
| Commercial   | 6 932         | 21 497         | 1 196         | 2 032         | n.p.          | —          | 70         | 2 295        | —              |
| Industrial   | 77 011        | 73 726         | 8 324         | 31 085        | n.p.          | —          | —          | 70           | —              |
| <b>Total</b> | <b>98 412</b> | <b>171 667</b> | <b>11 016</b> | <b>40 431</b> | <b>47 624</b> | <b>—</b>   | <b>72</b>  | <b>4 813</b> | <b>374 035</b> |

(a) Excludes the ACT but includes Albury. (b) Natural Gas not available in Tasmania.

Source: Australian Gas Association, Annual Survey of Distributors, Pipeliners and Producers.

## Electricity and gas operations

Tables 18.14 and 18.15 show statistics for the electricity industry relating to its operations, performance, assets and liabilities. Over the five years from 1991–92 to 1995–96, Australia's electricity generation has increased by 7%. New South Wales contributed 37% of the total electricity generated in 1995–96, an increase of about 12% on the level generated in 1991–92.

Conversely, electricity generation has declined during the last three years in South Australia.

Despite the increase in electricity generation during the period 1993–94 to 1995–96, sales of goods and services declined about 6%, from \$21.0b to \$19.6b, as shown in table 18.14. Operating profit before tax in 1995–96 was 64% of operating profit before tax in 1993–94, and the number of people employed by the electricity industry fell by 8,070 over the three-year period.

**18.14 ELECTRICITY INDUSTRY, Summary Measures of Performance, Assets and Liabilities**

|                                           | Unit  | 1993–94  | 1994–95  | 1995–96  |
|-------------------------------------------|-------|----------|----------|----------|
| Industry gross product                    |       |          |          |          |
| Turnover                                  | \$m   | 22 021.6 | 21 209.0 | 20 496.7 |
| Plus closing stocks                       | \$m   | 776.8    | 838.5    | 714.4    |
| Less opening stocks                       | \$m   | 812.4    | 796.8    | 826.6    |
| Less purchases and selected expenses      | \$m   | 12 088.1 | 12 612.0 | 12 440.7 |
| Equals industry gross product             | \$m   | 9 897.8  | 8 638.7  | 7 943.8  |
| Income and expenditure                    |       |          |          |          |
| Sales of goods and services               | \$m   | 20 968.0 | 20 299.2 | 19 606.3 |
| Purchases and selected expenses           | \$m   | 12 088.1 | 12 612.0 | 12 440.7 |
| Plus opening stocks                       | \$m   | 812.4    | 796.8    | 826.6    |
| Less closing stocks                       | \$m   | 776.8    | 838.5    | 714.4    |
| Equals cost of sales                      | \$m   | 12 123.8 | 12 570.3 | 12 552.9 |
| Trading profit (sales less cost of sales) | \$m   | 8 844.2  | 7 728.9  | 7 053.4  |
| Plus other income                         | \$m   | 696.7    | 1 029.6  | 1 570.7  |
| Less selected labour costs                | \$m   | 2 571.7  | 2 443.2  | 2 460.7  |
| Less depreciation                         | \$m   | 2 242.5  | 2 313.4  | 2 175.7  |
| Less other expenses                       | \$m   | 158.8    | 140.0    | 124.7    |
| Equals earnings before interest and tax   | \$m   | 4 567.7  | 3 861.9  | 3 862.9  |
| Less interest expenses                    | \$m   | 2 384.4  | 2 414.9  | 2 468.6  |
| Equals operating profit before tax        | \$m   | 2 183.3  | 1 447.0  | 1 394.2  |
| Assets and liabilities                    |       |          |          |          |
| Total value of assets                     | \$m   | 65 888.0 | 65 206.9 | 66 545.1 |
| Total value of liabilities                | \$m   | 34 458.9 | 35 041.4 | 35 648.8 |
| Net worth                                 | \$m   | 31 429.0 | 30 165.5 | 30 896.3 |
| Selected performance measures             |       |          |          |          |
| Asset turnover                            | %     | 0.3      | 0.3      | 0.3      |
| Trading profit margin                     | %     | 42.2     | 38.1     | 36.0     |
| Liquidity ratio                           | times | 1.1      | 0.8      | 0.9      |
| Debt to assets                            | %     | 52.9     | 54.4     | 54.2     |
| Other                                     |       |          |          |          |
| Management units at 30 June               | no.   | 69.0     | 71.0     | 57.0     |
| Employment at 30 June                     | no.   | 48 089.0 | 44 425.0 | 40 019.0 |
| Wages and salaries                        | \$m   | 2 282.4  | 2 139.7  | 2 174.5  |

Source: *Electricity and Gas Operations, Australia* (8208.0).

## 18.15 ELECTRICITY GENERATION(a)

|                | NSW(b)      | Vic.        | Qld         | SA(c)       | WA          | Tas.        | Aust.       |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Financial year | million kWh | million kWh | million kWh | million kWh | million kWh | million kWh | million kWh |
| 1991-92        | 55 566      | 38 305      | 28 923      | 10 026      | 14 626      | 8 968       | 156 413     |
| 1992-93        | 57 794      | 37 576      | 30 404      | 10 227      | 15 007      | 8 864       | 159 872     |
| 1993-94        | 57 792      | 37 019      | 31 831      | 10 560      | 15 755      | 8 855       | 161 813     |
| 1994-95        | 60 016      | 36 043      | 33 517      | 10 044      | 16 756      | 8 688       | 165 063     |
| 1995-96        | 62 047      | 36 621      | 33 618      | 8 734       | 17 422      | 9 100       | 167 543     |

(a) Statistics relate to generation of electricity within each State and take no account of interchange between States.

(b) Includes the ACT. (c) Includes the NT.

Source: *Manufacturing Production, Australia: Energy Products* (8368.0).

Tables 18.16 to 18.18 present statistics for the natural gas industry relating to its operations, performance, assets and liabilities. Australia's natural gas reticulation and transmission system has 78,864 km of pipeline in use in 1995-96, and 3,059 km of pipeline were constructed during the year. Table 18.17 shows that the natural gas industry generated revenue of \$2,427m in 1995-96. This represents a \$77m increase over the previous year. Industry gross product

declined from \$882m in 1994-95 to \$864m in 1995-96, as shown in table 18.18. Operating profit before tax declined substantially from \$317m to \$198m. While assets and liabilities both increased markedly, net worth increased by \$258.1m. Total employment in the natural gas industry has declined by about 43% over the last three years, from 7,074 employees in 1993-94 to 4,958 employees in 1995-96.

## 18.16 NATURAL GAS RETICULATION AND TRANSMISSION, Mains Laid and Mains in Use — 1995-96

|                               | NSW           | Vic.          | Qld          | SA           | WA            | Tas.(a)  | NT           | ACT          | Aust.         |
|-------------------------------|---------------|---------------|--------------|--------------|---------------|----------|--------------|--------------|---------------|
| Reticulation mains            | km            | km            | km           | km           | km            | km       | km           | km           | km            |
| CONSTRUCTION MAINS LAID       |               |               |              |              |               |          |              |              |               |
| Low and medium pressure       | 515           | 15            | 109          | (b)49        | 185           | —        | 4            | 171          | 950           |
| High pressure                 | (b)50         | 256           | 1            | 91           | 33            | —        | 4            | 26           | 361           |
| Transmission — high pressure  | 336           | —             | 756          | 4            | 632           | —        | 20           | —            | 1 748         |
| <b>Total</b>                  | <b>801</b>    | <b>271</b>    | <b>866</b>   | <b>46</b>    | <b>850</b>    | <b>—</b> | <b>28</b>    | <b>197</b>   | <b>3 059</b>  |
| TOTAL PIPELINE NETWORK IN USE |               |               |              |              |               |          |              |              |               |
| Low and medium pressure       | 18 727        | 9 261         | 3 320        | 3 371        | 9 025         | —        | 4            | 3 009        | 46 717        |
| High pressure                 | 1 588         | 13 413        | 122          | 2 952        | 561           | —        | 20           | 210          | 18 865        |
| Transmission — high pressure  | 2 042         | 2 168         | 2 119        | 1 380        | 3 337         | —        | 2 237        | —            | 13 282        |
| <b>Total</b>                  | <b>22 357</b> | <b>24 842</b> | <b>5 561</b> | <b>7 703</b> | <b>12 923</b> | <b>—</b> | <b>2 260</b> | <b>3 219</b> | <b>78 864</b> |

(a) Natural Gas not available in Tasmania. (b) Low pressure mains were replaced with high pressure reticulation mains.

Source: *Australian Gas Association, Annual Survey of Distributors, Pipeliners and Producers*.

**18.17 NATURAL GAS OPERATIONS OF UTILITIES, Revenue — 1995–96**

|              | NSW(a)       | Vic.           | Qld          | SA           | WA           | Tas.(b)  | NT         | ACT         | Aust.          |
|--------------|--------------|----------------|--------------|--------------|--------------|----------|------------|-------------|----------------|
|              | \$m          | \$m            | \$m          | \$m          | \$m          | \$m      | \$m        | \$m         | \$m            |
| Residential  | 186.8        | 699.2          | 27.8         | 97.8         | n.p.         | —        | —          | 26.5        | —              |
| Commercial   | 70.5         | 135.8          | 15.2         | 17.8         | n.p.         | —        | 0.9        | 21.0        | —              |
| Industrial   | 399.7        | 273.7          | 60.1         | 116.4        | n.p.         | —        | —          | 0.6         | —              |
| <b>Total</b> | <b>657.1</b> | <b>1 108.7</b> | <b>103.1</b> | <b>232.0</b> | <b>277.0</b> | <b>—</b> | <b>0.9</b> | <b>48.1</b> | <b>2 426.9</b> |

(a) Excludes the ACT but includes Albury. (b) Natural Gas not available in Tasmania.

Source: Australian Gas Association, *Annual Survey of Distributors, Pipeliners and Producers*.

**18.18 GAS INDUSTRY, Summary Measures of Performance, Assets and Liabilities**

|                                           | Unit  | 1993–94 | 1994–95 | 1995–96 |
|-------------------------------------------|-------|---------|---------|---------|
| Industry gross product                    |       |         |         |         |
| Turnover                                  | \$m   | 2 437.4 | 2 803.0 | 2 747.9 |
| Plus closing stocks                       | \$m   | 53.8    | 45.8    | 37.5    |
| Less opening stocks                       | \$m   | 59.0    | 53.1    | 45.2    |
| Less purchases and selected expenses      | \$m   | 1 553.8 | 1 913.6 | 1 876.8 |
| Equals industry gross product             | \$m   | 878.4   | 882.0   | 863.5   |
| Income and expenditure                    |       |         |         |         |
| Sales of goods and services               | \$m   | 2 403.1 | 2 719.9 | 2 623.1 |
| Purchases and selected expenses           | \$m   | 1 553.8 | 1 913.6 | 1 876.8 |
| Plus opening stocks                       | \$m   | 59.0    | 53.1    | 45.2    |
| Less closing stocks                       | \$m   | 53.8    | 45.8    | 37.5    |
| Equals cost of sales                      | \$m   | 1 558.9 | 1 920.9 | 1 884.5 |
| Trading profit (sales less cost of sales) | \$m   | 844.2   | 798.9   | 738.6   |
| Plus other income                         | \$m   | 48.8    | 22.0    | 35.1    |
| Less selected labour costs                | \$m   | 335.7   | 324.5   | 313.5   |
| Less depreciation                         | \$m   | 130.2   | 117.8   | 138.1   |
| Less other expenses                       | \$m   | 13.9    | 8.7     | 12.5    |
| Equals earnings before interest and tax   | \$m   | 413.2   | 370.0   | 309.6   |
| Less interest expenses                    | \$m   | 86.5    | 53.4    | 111.9   |
| Equals operating profit before tax        | \$m   | 326.6   | 316.6   | 197.7   |
| Assets and liabilities                    |       |         |         |         |
| Total value of assets                     | \$m   | 3 009.6 | 3 015.9 | 3 934.7 |
| Total value of liabilities                | \$m   | 1 826.7 | 1 432.8 | 2 093.5 |
| Net worth                                 | \$m   | 1 182.9 | 1 583.1 | 1 841.2 |
| Selected performance measures             |       |         |         |         |
| Asset turnover                            | %     | 0.8     | 0.9     | 0.7     |
| Trading profit margin                     | %     | 35.1    | 29.4    | 28.2    |
| Liquidity ratio                           | times | 0.6     | 0.8     | 0.8     |
| Debt to assets                            | %     | 61.8    | 48.2    | 53.7    |
| Other                                     |       |         |         |         |
| Management units at 30 June               | no.   | 24.0    | 17.0    | 14.0    |
| Employment at 30 June                     | no.   | 7 074.0 | 6 738.0 | 4 958.0 |
| Wages and salaries                        | \$m   | 299.7   | 298.0   | 286.6   |

Source: *Electricity and Gas Operations, Australia* (8208.0).

## Administrative arrangements

The Commonwealth Minister for Primary Industries and Energy has portfolio responsibility for national energy policy matters, including the commercial development of hydrocarbon fuels and minerals. The Department of Primary Industries and Energy provides support for a number of advisory bodies including the National Energy Research Development and Demonstration Council, the Australian Minerals and Energy Council, the National Energy Consultative Council, the National Oil Supplies Advisory Committee, the National Petroleum Advisory Committee, the National Fuels Emergency Consultative Committee, the Australian Coal Marketing and Technology Council, and the Consultative Committee on Safety in the Offshore Petroleum Industry.

The Department is also responsible for the implementation of action required from Australia's membership of the IEA and for the national system of accounting for control of nuclear materials under Australia's Agreement with the International Atomic Energy Agency.

The IEA carries out the International Energy Program and the Long Term Co-operation Program. These programs aim to:

- prepare member countries against the risk of oil supply disruptions and share remaining supplies in the event of a severe oil shortfall;
- develop alternative energy sources and the more efficient use of energy through cooperative research and development programs; and
- promote cooperative relations with other oil-producing and oil-consuming countries.



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The following organisations also produce energy statistics:

- Australian Bureau of Agricultural and Resource Economics;
- Australian Institute of Petroleum;
- Electricity Supply Association of Australia;
- Department of Primary Industries and Energy; and
- Joint Coal Board.

State government departments and instrumentalities are also important sources of energy data, particularly at the regional level. A number of private corporations and other entities operating within the energy field also publish or make available a significant amount of information.



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## Introduction

**M**anufacturing broadly relates to the physical or chemical transformation of materials or components into new products, whether the work is performed by power-driven machinery or by hand.

The manufacturing industry is an important sector of the Australian economy, contributing about 14% of Australia's gross domestic product (GDP) and about 13% of employment. However, despite significant increases in the value of the manufacturing industry's gross product (increasing by more than 20% over the past 10 years), the industry's share of Australian GDP has fallen over the past 20 years from around 20% to its current 14%.

Similarly, employment in the manufacturing industry has fallen from around 1.2 million persons 20 years ago to 923,100 persons at June 1996.

This chapter presents a range of data about the manufacturing sector as a whole, and about broad categories of manufacturing industry. These categories are referred to as 'subdivisions'.

Some data are provided from the annual manufacturing survey, for which the latest results relate to 1995–96, while others are derived from various monthly and quarterly surveys for which the latest results relate to 1996–97.

## Manufacturing trends

Movements in the level of manufacturing activity at constant prices described below are based on the quarterly index of industrial production.

Manufacturing production in 1996–97 was 14% higher than five years earlier, 22% higher than 10 years earlier and 24% higher than 15 years earlier.

Over the period from 1991–92 to 1996–97, the index of manufacturing production increased steadily (table 19.1).

Generally, production for the individual subdivisions of the manufacturing industry has also grown over the five years to 1996–97. Largest growth over the period was recorded for Machinery and equipment manufacturing (25%), Wood and paper product manufacturing (17%), Petroleum, coal, chemical and associated product manufacturing (14%) and Printing, publishing and recorded media (13%).

The only subdivision which did not grow over the five years to 1996–97 was the Textile, clothing, footwear and leather manufacturing industry which fell by 1%.

## Structure of the manufacturing industry

At 30 June 1996 manufacturing establishments in Australia employed 923,100 persons. During 1995–96 those establishments paid \$29,902m in wages and salaries and recorded \$197,963m in turnover (table 19.2).

**19.1 MANUFACTURING INDUSTRY GROSS PRODUCT, Indexes(a)**

| Industry subdivision                                           | 1991–92     | 1992–93     | 1993–94      | 1994–95      | 1995–96      | 1996–97      |
|----------------------------------------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|
| Food, beverage and tobacco manufacturing                       | 102.9       | 104.7       | 107.8        | 108.7        | 111.6        | 111.9        |
| Textile, clothing, footwear and leather manufacturing          | 92.8        | 89.5        | 90.2         | 89.0         | 88.0         | 91.9         |
| Wood and paper product manufacturing                           | 96.0        | 101.7       | 105.0        | 109.0        | 105.2        | 112.7        |
| Printing, publishing and recorded media                        | 91.0        | 96.7        | 100.5        | 107.5        | 104.2        | 102.5        |
| Petroleum, coal, chemical and associated product manufacturing | 102.9       | 104.6       | 110.0        | 113.6        | 117.2        | 116.9        |
| Non-metallic mineral product manufacturing                     | 87.8        | 95.5        | 97.8         | 99.5         | 92.0         | 88.6         |
| Metal product manufacturing                                    | 98.0        | 97.3        | 101.3        | 100.2        | 104.2        | 102.9        |
| Machinery and equipment manufacturing                          | 97.1        | 92.5        | 101.6        | 112.7        | 115.8        | 121.4        |
| Other manufacturing                                            | 82.6        | 83.2        | 88.5         | 92.1         | 87.8         | 90.0         |
| <b>Total manufacturing</b>                                     | <b>95.8</b> | <b>97.4</b> | <b>102.3</b> | <b>106.2</b> | <b>107.4</b> | <b>108.9</b> |

(a) Average 1989–90 prices. Reference base year 1989–90 = 100.0.

Source: *Indexes of Industrial Production, Australia* (8125.0).

The manufacturing subdivisions with the most persons employed at 30 June 1996 were Machinery and equipment manufacturing (204,700), Food, beverage and tobacco manufacturing (162,700) and Metal product manufacturing (147,700). Of the manufacturing subdivisions, Non-metallic mineral product manufacturing (37,700) was the smallest employer, accounting for only 4.1% of manufacturing employment. Further information on manufacturing employment is contained in tables 19.4 and 19.5.

Food, beverage and tobacco manufacturing was the largest contributor to total manufacturing turnover. Its turnover of \$43,067m was 22% of the total for manufacturing. Other subdivisions making major contributions were Machinery and equipment manufacturing (20%), Metal product manufacturing (19%) and Petroleum, coal, chemical and associated product manufacturing (15%).

## Turnover

Turnover is a key measure of the performance of establishments in an industry. It covers the sales of goods and services by an establishment (together with transfers of goods to other parts

of the same business) and also includes all other operating revenue generated by the establishment.

New South Wales (34%) and Victoria (32%) together accounted for almost two-thirds of national manufacturing turnover in 1995–96 (table 19.3). New South Wales contributed 44% of the national turnover of the Printing, publishing and recorded media industry, and 25% to 40% of the national turnover of the remaining manufacturing industries. Victoria contributed 47% of the national turnover of the Textile, clothing, footwear and leather manufacturing industry, 40% of the national turnover of the Machinery and equipment manufacturing industry and 20% to 35% of the national turnover of the remaining manufacturing industries. Although Queensland accounted for only 15% of national manufacturing turnover, it contributed 21% of national turnover for Non-metallic mineral product manufacturing and 21% for Food, beverages and tobacco manufacturing. South Australia, which accounted for 9% of national manufacturing turnover, contributed 18% of national turnover for Machinery and equipment manufacturing.

### 19.2 MANUFACTURING, Summary of Operations By Industry(a) — 1995–96

| Industry subdivision                                              | Employment<br>at 30 June(b) | Wages and<br>salaries(c) | Turnover       | Turnover<br>per person<br>employed |
|-------------------------------------------------------------------|-----------------------------|--------------------------|----------------|------------------------------------|
|                                                                   | '000                        | \$m                      | \$m            | \$'000                             |
| Food, beverage and tobacco manufacturing                          | 162.7                       | 5 175                    | 43 067         | 265                                |
| Textile, clothing, footwear and leather manufacturing             | 75.9                        | 1 857                    | 9 832          | 130                                |
| Wood and paper product manufacturing                              | 60.4                        | 1 858                    | 11 446         | 190                                |
| Printing, publishing and recorded media                           | 90.8                        | 3 073                    | 13 675         | 151                                |
| Petroleum, coal, chemical and associated product<br>manufacturing | 89.5                        | 3 383                    | 30 058         | 336                                |
| Non-metallic mineral product manufacturing                        | 37.7                        | 1 315                    | 8 599          | 228                                |
| Metal product manufacturing                                       | 147.7                       | 5 206                    | 36 918         | 250                                |
| Machinery and equipment manufacturing                             | 204.7                       | 6 766                    | 38 704         | 189                                |
| Other manufacturing                                               | 53.7                        | 1 269                    | 5 664          | 105                                |
| <b>Total manufacturing</b>                                        | <b>923.1</b>                | <b>29 902</b>            | <b>197 963</b> | <b>214</b>                         |

(a) Division C of the Australian and New Zealand Standard Industrial Classification (ANZSIC). (b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

Source: *Manufacturing Industry, Australia, Preliminary* (8201.0).

## 19.3 MANUFACTURING INDUSTRY TURNOVER, 1995–96

|                                                                | NSW           | Vic.          | Qld           | SA            | WA            | Tas.         | NT         | ACT        | Aust.          |
|----------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|--------------|------------|------------|----------------|
| Industry subdivision                                           | \$m           | \$m           | \$m           | \$m           | \$m           | \$m          | \$m        | \$m        | \$m            |
| Food, beverage and tobacco manufacturing                       | 13 516        | 12 313        | 8 975         | 3 762         | 2 989         | 1 335        | 102        | 74         | 43 067         |
| Textile, clothing, footwear and leather manufacturing          | 3 232         | 4 623         | 589           | 844           | 305           | 226          | 4          | 9          | 9 832          |
| Wood and paper product manufacturing                           | 3 634         | 3 486         | 1 587         | 1 014         | 666           | 995          | 25         | 40         | 11 446         |
| Printing, publishing and recorded media                        | 6 009         | 4 360         | 1 357         | 721           | 802           | 179          | 39         | 207        | 13 675         |
| Petroleum, coal, chemical and associated product manufacturing | 11 627        | 10 294        | 4 012         | 1 156         | 2 729         | 212          | 24         | 4          | 30 058         |
| Non-metallic mineral product manufacturing                     | 2 776         | 2 123         | 1 827         | 527           | 978           | 266          | 59         | 44         | 8 599          |
| Metal product manufacturing                                    | 14 093        | 8 136         | 6 410         | 2 628         | 4 176         | 951          | 482        | 42         | 36 918         |
| Machinery and equipment manufacturing                          | 10 498        | 15 661        | 3 240         | 7 088         | 1 728         | 385          | 41         | 62         | 38 704         |
| Other manufacturing                                            | 1 854         | 1 675         | 979           | 461           | 558           | 73           | 11         | 53         | 5 664          |
| <b>Total manufacturing</b>                                     | <b>67 239</b> | <b>62 671</b> | <b>28 976</b> | <b>18 202</b> | <b>14 932</b> | <b>4 622</b> | <b>787</b> | <b>534</b> | <b>197 963</b> |

Source: Manufacturing Industry, Australia, Preliminary (8201.0).

## Employment

New South Wales (33%) and Victoria (32%) dominate manufacturing employment in Australia, accounting for almost two-thirds of national manufacturing employment as at 30 June 1996. In all industries, New South Wales and Victoria are the two largest employing States. However, different industries predominate, in terms of employment, in different States (table 19.4).

New South Wales manufacturing establishments employ 39% of persons in Printing, publishing and recorded media, and 35% of those in the Metal product manufacturing industry. Some

48% of all persons employed by Textile, clothing, footwear and leather manufacturers are located in Victoria.

Queensland establishments employ 21% of persons in Food, beverage and tobacco manufacturing and 19% of those in Non-metallic mineral product manufacturing. South Australia accounts for 15% of employment in the Machinery and equipment manufacturing industry.

For further information on employed wage and salary earners and the characteristics of the manufacturing labour force, refer to *Chapter 6, Labour*.

## 19.4 MANUFACTURING INDUSTRY EMPLOYMENT, June 1996

|                                                                | NSW          | Vic.         | Qld          | SA          | WA          | Tas.        | NT         | ACT        | Aust.        |
|----------------------------------------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|------------|------------|--------------|
| Industry subdivision                                           | '000         | '000         | '000         | '000        | '000        | '000        | '000       | '000       | '000         |
| Food, beverage and tobacco manufacturing                       | 49.1         | 42.7         | 34.4         | 16.4        | 13.3        | 5.7         | 0.6        | 0.5        | 162.7        |
| Textile, clothing, footwear and leather manufacturing          | 23.7         | 36.7         | 5.3          | 5.1         | 3.2         | 1.8         | 0.1        | 0.1        | 75.9         |
| Wood and paper product manufacturing                           | 19.0         | 17.1         | 10.7         | 5.8         | 3.9         | 3.4         | 0.2        | 0.3        | 60.4         |
| Printing, publishing and recorded media                        | 35.0         | 28.8         | 11.2         | 5.3         | 6.1         | 2.0         | 0.6        | 1.7        | 90.8         |
| Petroleum, coal, chemical and associated product manufacturing | 33.3         | 33.8         | 9.5          | 5.9         | 6.1         | 0.7         | 0.1        | 0.0        | 89.5         |
| Non-metallic mineral product manufacturing                     | 12.0         | 9.9          | 7.2          | 2.5         | 4.9         | 1.0         | 0.1        | 0.2        | 37.7         |
| Metal product manufacturing                                    | 52.4         | 36.7         | 25.3         | 11.6        | 16.4        | 3.7         | 1.3        | 0.3        | 147.7        |
| Machinery and equipment manufacturing                          | 62.7         | 73.2         | 23.5         | 30.3        | 11.0        | 3.1         | 0.3        | 0.5        | 204.7        |
| Other manufacturing                                            | 16.3         | 15.6         | 10.1         | 4.6         | 5.3         | 1.2         | 0.2        | 0.4        | 53.7         |
| <b>Total manufacturing</b>                                     | <b>303.5</b> | <b>294.5</b> | <b>137.3</b> | <b>87.5</b> | <b>70.4</b> | <b>22.5</b> | <b>3.5</b> | <b>3.9</b> | <b>923.1</b> |

Source: Manufacturing Industry, Australia, Preliminary (8201.0).

## Concentration of employment within the manufacturing industry

Concentration statistics provide information on the extent to which particular groups of related enterprises (enterprise groups) contribute to economic activity in individual industries. They are an indicator of the degree of competition existing between enterprise groups engaged in an industry. Enterprise groups are ranked in size (in terms of turnover for the relevant industry) from largest to smallest. The largest 12 enterprise groups are then formed into three groupings of four and employment data are compiled for these groupings and for the remaining enterprise groups.

As table 19.5 shows, at the end of June 1996 the most concentrated manufacturing industries, in terms of the share of employment accounted for by the largest four groups of related enterprises, were Non-metallic mineral product manufacturing (35%), Wood and paper product manufacturing (22%), and Metal product manufacturing (20%). The industries with the lowest levels of concentration were Petroleum, coal, chemical and associated product manufacturing (8%), Machinery and equipment manufacturing (8%) and Other manufacturing (5%).

## Industrial disputes

There were 112 industrial disputes in the manufacturing industry during calendar year 1996. These disputes involved almost 50,000 employees and resulted in the loss of just over 100,000 working days (table 19.6). Compared to experience in 1995, this represented a substantial fall (28%) in the number of disputes, in employees involved

(down 43%) and in working days lost (down 35%). 1996 results were also lower than 1994 results in the number of disputes (down 32%), in employees involved (down 3%) and in working days lost (down 16%).

Manufacturing industry accounted for 21% of all disputes during 1996 compared to 24% in 1995. Manufacturing industry employees involved in disputes made up 8% of all employees involved in disputes during 1996, a marked decrease on the 25% recorded for 1995. Manufacturing industry disputes were responsible for 11% of working days lost during 1996, which was also substantially lower than in 1995 when manufacturing industry disputes represented 29% of working days lost.

### 19.6 INDUSTRIAL DISPUTES

| Year                                              | Unit | Manufacturing | All industries |
|---------------------------------------------------|------|---------------|----------------|
| <b>TOTAL INDUSTRIAL DISPUTES</b>                  |      |               |                |
| 1994                                              | no.  | 164           | 560            |
| 1995                                              | no.  | 156           | 643            |
| 1996                                              | no.  | 112           | 543            |
| <b>EMPLOYEES INVOLVED DIRECTLY AND INDIRECTLY</b> |      |               |                |
| 1994                                              | '000 | 50.2          | 265.1          |
| 1995                                              | '000 | 86.1          | 344.3          |
| 1996                                              | '000 | 48.8          | 577.7          |
| <b>WORKING DAYS LOST</b>                          |      |               |                |
| 1994                                              | '000 | 123.2         | 501.0          |
| 1995                                              | '000 | 159.9         | 547.6          |
| 1996                                              | '000 | 103.5         | 928.5          |

Source: *Industrial Disputes, Australia* (6322.0).

### 19.5 CONCENTRATION OF EMPLOYMENT, Manufacturing Establishments — June 1996

| Industry subdivision                                           | Enterprise groups ranked by turnover |          |                    |          |                     |          |              |           |
|----------------------------------------------------------------|--------------------------------------|----------|--------------------|----------|---------------------|----------|--------------|-----------|
|                                                                | 4 Largest                            |          | 5th to 8th largest |          | 9th to 12th largest |          | Remainder    |           |
|                                                                | '000                                 | %        | '000               | %        | '000                | %        | '000         | %         |
| Food, beverage and tobacco manufacturing                       | 20.3                                 | 12       | 9.4                | 6        | 8.4                 | 5        | 124.7        | 77        |
| Textile, clothing, footwear and leather manufacturing          | 7.0                                  | 9        | 4.1                | 5        | 2.3                 | 3        | 62.5         | 82        |
| Wood and paper product manufacturing                           | 13.2                                 | 22       | 4.6                | 8        | 2.4                 | 4        | 40.2         | 66        |
| Printing, publishing and recorded media                        | 16.3                                 | 18       | 6.9                | 8        | 5.9                 | 6        | 61.7         | 68        |
| Petroleum, coal, chemical and associated product manufacturing | 6.9                                  | 8        | 6.5                | 7        | 4.1                 | 5        | 72.1         | 81        |
| Non-metallic mineral product manufacturing                     | 13.2                                 | 35       | 3.7                | 10       | 1.5                 | 4        | 19.3         | 51        |
| Metal product manufacturing                                    | 29.2                                 | 20       | 4.1                | 3        | 5.9                 | 4        | 108.5        | 73        |
| Machinery and equipment manufacturing                          | 15.6                                 | 8        | 11.5               | 6        | 12.5                | 6        | 165.0        | 81        |
| Other manufacturing                                            | 2.6                                  | 5        | 1.2                | 2        | 0.5                 | 1        | 49.4         | 92        |
| <b>Total manufacturing</b>                                     | <b>57.1</b>                          | <b>6</b> | <b>20.2</b>        | <b>2</b> | <b>17.9</b>         | <b>2</b> | <b>827.9</b> | <b>90</b> |

Source: ABS, unpublished data *Manufacturing Industry*.



## Trade union membership

The ten year period from 1986 to 1996 marked a fall in the proportion of manufacturing employees with trade union membership, from slightly more than 50% to a little less than 40%. This represented a decrease in union membership of 135,300 manufacturing employees over that period. The fall in percentage terms from 51.2% of manufacturing employees in 1986 to 38.7% in 1996 was generally steady over the period, with the largest two year fall being nearly 4% between 1992 and 1994. Despite the large fall in membership numbers, manufacturing industry continues to have a higher rate of union membership than the average for all industries (table 19.7).

In percentage terms union membership in all industries has followed a downward trend similar to that in manufacturing.

While 42% of permanent manufacturing employees belonged to a trade union in 1996, only 19% of casual employees were members. However, these proportions have moved in different directions since 1994 (down 3% and up 3% respectively). Membership rates for permanent female employees, at 35%, were significantly lower than for permanent male employees (45%). The membership rate for casual manufacturing employees was higher than the all industries average for casual employees (table 19.8).

**19.7 EMPLOYEES WITH TRADE UNION MEMBERSHIP**

| Period         | Manufacturing |                                | All industries |                                |
|----------------|---------------|--------------------------------|----------------|--------------------------------|
|                | Employees     | Proportion of total employment | Employees      | Proportion of total employment |
|                | '000          | %                              | '000           | %                              |
| August 1986    | 545.4         | 51.2                           | 2 593.9        | 45.6                           |
| August 1988    | 546.7         | 48.5                           | 2 535.9        | 41.6                           |
| August 1990(a) | 520.9         | 46.1                           | 2 659.6        | 40.5                           |
| August 1992    | 455.3         | 44.4                           | 2 508.8        | 39.6                           |
| August 1994    | 421.6         | 40.8                           | 2 283.4        | 35.0                           |
| August 1996    | 410.1         | 38.7                           | 2 194.3        | 31.1                           |

(a) Excludes persons aged 70 years and over.

Source: *Trade Union Members, Australia* (6325.0).

**19.8 TRADE UNION MEMBERS, August 1996**

| Employees      | Manufacturing | All industries |
|----------------|---------------|----------------|
|                | %             | %              |
| <b>MALES</b>   |               |                |
| Permanent      | 44.6          | 38.8           |
| Casual         | 20.0          | 13.9           |
| Total          | 41.7          | 33.5           |
| <b>FEMALES</b> |               |                |
| Permanent      | 34.7          | 35.5           |
| Casual         | 17.3          | 12.4           |
| Total          | 30.5          | 28.1           |
| <b>PERSONS</b> |               |                |
| Permanent      | 42.2          | 37.4           |
| Casual         | 18.8          | 13.1           |
| Total          | 38.7          | 31.1           |

Source: *Trade Union Members, Australia* (6325.0).

## Capital expenditure

As table 19.9 shows, new capital expenditure in the manufacturing industry fell by 3% between 1995–96 and 1996–97. Industries with the greatest falls were Metal product manufacturing (down 31%), Printing, publishing and recorded media (down 19%) and Wood and paper product manufacturing (down 17%). Industries with the greatest increases were Non-metallic mineral product manufacturing (up 45%) and Machinery and equipment manufacturing (up 21%).

Comparing private new capital expenditure levels in 1996–97 with two years earlier shows higher levels in five of the nine manufacturing subdivisions. Largest increases were in Machinery and equipment manufacturing (up 47%), Non-metallic mineral product manufacturing (up 25%) and Wood and paper product manufacturing (up 21%). The most significant fall was by the Printing, publishing and recorded media industry (down 52%).

## 19.9 PRIVATE NEW CAPITAL EXPENDITURE IN MANUFACTURING INDUSTRY

|                                                                | 1994-95      | 1995-96       | 1996-97       |
|----------------------------------------------------------------|--------------|---------------|---------------|
| Industry subdivision                                           | \$m          | \$m           | \$m           |
| Food, beverage and tobacco manufacturing                       | 2 046        | 1 895         | 1 991         |
| Textile, clothing, footwear and leather manufacturing          | 367          | 271           | 251           |
| Wood and paper product manufacturing                           | 764          | 1 112         | 921           |
| Printing, publishing and recorded media                        | 1 126        | 673           | 546           |
| Petroleum, coal, chemical and associated product manufacturing | 1 757        | 1 719         | 1 650         |
| Non-metallic mineral product manufacturing                     | 877          | 756           | 1 096         |
| Metal product manufacturing                                    | 1 402        | 2 192         | 1 517         |
| Machinery and equipment manufacturing                          | 1 326        | 1 611         | 1 952         |
| Other manufacturing                                            | 191          | 227           | 203           |
| <b>Total manufacturing</b>                                     | <b>9 856</b> | <b>10 457</b> | <b>10 127</b> |

Source: Private New Capital Expenditure, Australia, Actual and Expected Expenditure (5626.0).

## Sales and output

At average 1989-90 prices, output (sales adjusted for changes in the level of stocks) by private manufacturing businesses increased by just 0.5% between 1995-96 and 1996-97 (table 19.10). Five manufacturing subdivisions increased output, with Wood and paper product manufacturing (by 8.9%) and Textile, clothing, footwear and leather manufacturing (by 5.4%) showing the largest rises. The remaining four subdivisions recorded falls between 1995-96 and 1996-97. The largest decrease was by Non-metallic mineral product manufacturing (by 4.5%).

The largest contributors to manufacturing output were Food, beverage and tobacco manufacturing (21%), Machinery and equipment manufacturing (20%), Petroleum, coal, chemical and associated product manufacturing (18%) and Metal product manufacturing (17%).

At average 1989-90 prices, the value of sales by private manufacturing businesses in 1996-97 was 1.9% higher than for 1995-96. In general, changes in sales from 1995-96 to 1996-97 and industry contributions to total manufacturing sales were similar to those for output. However, one exception was Petroleum, coal, chemical and associated products manufacturing, for which sales grew slightly (by 0.2%), but output fell by 1.7%.

At average 1989-90 prices, the value of stocks held by private manufacturing businesses at June 1997 was 1.5% lower than at June 1996. Stocks held fell in five subdivisions, with the largest falls in Other manufacturing (by 9.9%) and Metal product manufacturing (by 9.0%). Largest increases in stocks held were by Non-metallic mineral product manufacturing (by 7.5%) and Wood and paper product manufacturing (by 6.4%).

**19.10 SALES AND OUTPUT(a), Private Manufacturing Businesses**

| Industry subdivision                                           | Sales of goods produced |                | Output of goods |                |
|----------------------------------------------------------------|-------------------------|----------------|-----------------|----------------|
|                                                                | 1995–96                 | 1996–97        | 1995–96         | 1996–97        |
|                                                                | \$m                     | \$m            | \$m             | \$m            |
| Food, beverage and tobacco manufacturing                       | 36 141                  | 36 495         | 36 580          | 36 764         |
| Textile, clothing, footwear and leather manufacturing          | 7 869                   | 8 132          | 7 782           | 8 200          |
| Wood and paper product manufacturing                           | 10 501                  | 11 558         | 10 707          | 11 655         |
| Printing, publishing and recorded media                        | 7 424                   | 7 303          | 7 458           | 7 276          |
| Petroleum, coal, chemical and associated product manufacturing | 30 899                  | 30 960         | 31 216          | 30 700         |
| Non-metallic mineral product manufacturing                     | 8 772                   | 8 285          | 8 759           | 8 369          |
| Metal product manufacturing                                    | 30 543                  | 30 379         | 30 855          | 29 988         |
| Machinery and equipment manufacturing                          | 32 237                  | 34 250         | 32 902          | 34 083         |
| Other manufacturing                                            | 5 386                   | 5 571          | 5 436           | 5 511          |
| <b>Total manufacturing</b>                                     | <b>169 772</b>          | <b>172 933</b> | <b>171 695</b>  | <b>172 546</b> |

(a) Average 1989–90 Prices. Output is calculated as sales of goods produced minus opening stocks plus closing stocks.

Source: *Stocks and Sales, Selected Industries, Australia* (5629.0).

**Company profits**

Profits before income tax earned by manufacturing companies fell by 6.5% between 1995–96 and 1996–97, following a fall of 18% from 1994–95 (table 19.11). Profits fell between 1995–96 and 1996–97 in all but one manufacturing subdivision, Food, beverage and tobacco manufacturing, which remained virtually unchanged. Largest falls were for Textile, clothing, footwear and leather manufacturing (25%), Other manufacturing (25%) and Non-metallic mineral product manufacturing (21%).

Industry subdivisions contributing most to manufacturing industry profits for 1996–97 were Food, beverage and tobacco manufacturing (23%), Petroleum, coal, chemical and associated product manufacturing (19%), Machinery and

equipment manufacturing (18%) and Metal product manufacturing (15%).

**Principal manufactured commodities**

Table 19.12 shows the total production of selected manufactured commodities.

Of the 25 commodities shown, production of 14 commodities was lower in 1996–97 than in 1995–96. The largest decrease was for Domestic clothes washing machines (9.8%). The largest increase was for Tobacco and cigarettes (8.8%).

Comparisons over a longer period (1993–94 to 1996–97) show an increase of 22% for Cotton woven fabrics and a fall of 23% for Woven fabrics of man-made fibres.

**19.11 PROFITS BEFORE INCOME TAX, Manufacturing Companies**

| Industry subdivision                                           | 1994–95       | 1995–96       | 1996–97       |
|----------------------------------------------------------------|---------------|---------------|---------------|
|                                                                | \$m           | \$m           | \$m           |
| Food, beverage and tobacco manufacturing                       | 2 252         | 2 291         | 2 295         |
| Textile, clothing, footwear and leather manufacturing          | 469           | 269           | 201           |
| Wood and paper product manufacturing                           | 983           | 731           | 621           |
| Printing, publishing and recorded manufacturing                | 1 411         | 1 127         | 1 089         |
| Petroleum, coal, chemical and associated product manufacturing | 2 165         | 2 114         | 1 890         |
| Non-metallic mineral product manufacturing                     | 1 132         | 754           | 598           |
| Metal product manufacturing                                    | 2 364         | 1 656         | 1 511         |
| Machinery and equipment manufacturing                          | 2 170         | 1 774         | 1 769         |
| Other manufacturing                                            | 64            | 56            | 42            |
| <b>Total manufacturing</b>                                     | <b>13 011</b> | <b>10 711</b> | <b>10 015</b> |

Source: *Company Profits, Australia* (5651.0).

## 19.12 SELECTED COMMODITIES PRODUCED BY MANUFACTURING ESTABLISHMENTS(a)

| Commodity                                   | Unit of quantity    | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
|---------------------------------------------|---------------------|---------|---------|---------|---------|
| Confectionery                               |                     |         |         |         |         |
| Chocolate based                             | t                   | 110 910 | 110 398 | 114 211 | 109 120 |
| Other                                       | t                   | 68 324  | 71 974  | 72 830  | 71 939  |
| Beer(b)                                     | mill. L             | 1 752   | 1 788   | 1 742   | 1 735   |
| Tobacco and cigarettes(c)                   | t                   | 23 273  | 23 083  | 20 390  | 22 192  |
| Woven fabric(d)                             |                     |         |         |         |         |
| Man-made fibre                              | '000 m <sup>2</sup> | 184 885 | 185 171 | 149 066 | 142 194 |
| Cotton (including towelling)                | '000 m <sup>2</sup> | 49 864  | 51 938  | 63 886  | 60 616  |
| Wool (including blanketing)                 | '000 m <sup>2</sup> | 7 893   | 8 189   | 6 523   | 6 300   |
| Yarn(d)                                     |                     |         |         |         |         |
| Cotton                                      | t                   | 33 780  | 37 643  | 36 955  | 39 853  |
| Wool                                        | t                   | 21 016  | 23 096  | 20 063  | 18 284  |
| Textile floor coverings                     | '000 m <sup>2</sup> | 46 910  | 47 258  | 42 683  | 44 681  |
| Newsprint                                   | '000 t              | 411     | 423     | 445     | 422     |
| Non-laminated particle board(e)             | '000 m <sup>3</sup> | 752     | 846     | 804     | 774     |
| Plastics in primary form(f)                 | '000 t              | 1 147   | 1 240   | 1 222   | 1 235   |
| Portland cement                             | '000 t              | 6 733   | 7 124   | 6 397   | 6 702   |
| Claybricks for structural purposes          | mill.               | 1 814   | 1 860   | 1 458   | 1 468   |
| Ready mixed concrete                        | '000 m <sup>3</sup> | 15 267  | 15 892  | 14 556  | 15 393  |
| Basic iron, spiegeleisen and sponge iron(g) | '000 t              | 7 209   | 7 449   | 7 553   | 7 345   |
| Blooms and slabs of iron or steel(g)        | '000 t              | 7 627   | 7 807   | 7 950   | 7 775   |
| Motor Vehicles                              |                     |         |         |         |         |
| Cars and station wagons                     | '000                | 298     | 301     | 303     | 304     |
| Vehicles for goods and materials(h)         | '000                | 23      | 27      | 25      | 27      |
| Domestic refrigerators                      | '000                | 460     | 408     | 414     | 398     |
| Domestic clothes washing machines(i)        | '000                | 326     | 305     | 297     | 268     |
| Electric motors                             | '000                | 2 990   | 3 099   | 2 850   | 2 669   |
| Electricity                                 | mill. kWh           | 161 813 | 165 063 | 167 543 | 168 370 |
| Gas(j)                                      | TJ                  | 587 013 | 629 406 | 620 889 | 637 174 |

(a) Data in this table exclude operations by single establishment businesses employing fewer than four persons. (b) Includes ale, stout and porter. Excludes extra light beer containing less than 1.15% but more than 0.5% by volume of alcohol. (c) Source: Australian Tobacco Marketing Advisory Committee, until April 1995. (d) Includes mixtures predominantly of the fibre named. (e) Includes board for subsequent conversion to other purposes. Excludes fibreboard and fibre paperboard. (f) Includes liquid, paste, powder, granules, flakes, blocks, irregular shapes, lumps and similar forms. (g) Comprises production of BHP Steel only. (h) Includes utilities, panel vans and prime movers for semi-trailers. Excludes off-highway trucks (for example, dump wagons), materials handling trucks (for example, forklift trucks) and semi-trailers. (i) Households or laundry-type, each of a dry linen capacity not exceeding 10kg. (j) Available for issue through mains. Includes natural gas.

Source: *Manufacturing Production, Australia* (8301.0).

## Price indexes

The ABS compiles two price indexes relating to the manufacturing sector: the Price Indexes of Materials Used in Manufacturing Industries; and

the Price Indexes of Articles Produced by Manufacturing Industries (see *Chapter 28, Prices* for more details). Tables 19.13 and 19.14 set out index numbers for selected components of those indexes.

**19.13 PRICE INDEXES, Materials Used in Manufacturing Industries(a)(b)**

| Industry                                 | 1991–92      | 1992–93      | 1993–94      | 1994–95      | 1995–96      | 1996–97      |
|------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Food, beverages and tobacco              | 100.0        | 104.3        | 107.7        | 111.0        | 111.7        | 106.2        |
| Textiles and textile products            | 87.0         | 88.1         | 89.9         | 103.0        | 100.9        | 93.0         |
| Knitting mills and clothing              | 104.5        | 108.1        | 107.7        | 109.2        | 111.4        | 105.9        |
| Footwear                                 | 99.8         | 99.4         | 102.4        | 109.5        | 111.7        | 111.0        |
| Leather and leather products             | 85.3         | 93.2         | 99.6         | 101.9        | 95.1         | 95.0         |
| Sawmilling and timber products           | 104.5        | 109.2        | 115.3        | 111.3        | 114.0        | 113.7        |
| Paper and paper products                 | 96.3         | 95.6         | 89.7         | 95.8         | 108.3        | 97.0         |
| Printing and publishing                  | 102.5        | 103.3        | 102.7        | 101.1        | 114.1        | 105.8        |
| Petroleum and coal products              | 112.6        | 121.7        | 101.9        | 100.2        | 103.5        | 117.2        |
| Chemicals                                | 106.2        | 105.7        | 103.5        | 107.8        | 113.8        | 110.7        |
| Rubber and plastics                      | 100.3        | 104.5        | 106.9        | 118.8        | 122.0        | 113.4        |
| Non-metallic mineral products            | 115.2        | 116.6        | 109.8        | 114.3        | 113.6        | 113.0        |
| Basic metal products                     | 95.4         | 94.7         | 87.6         | 94.0         | 99.4         | 93.1         |
| Fabricated metal products                | 101.3        | 100.9        | 100.8        | 104.4        | 108.7        | 106.2        |
| Transport equipment and parts            | 101.9        | 108.0        | 115.0        | 116.2        | 115.1        | 110.0        |
| Electronic equipment and other machinery | 99.8         | 101.8        | 102.7        | 106.4        | 107.8        | 102.6        |
| Other manufacturing                      | 103.4        | 106.3        | 111.5        | 112.3        | 112.9        | 110.9        |
| <b>All materials</b>                     | <b>101.4</b> | <b>106.4</b> | <b>104.7</b> | <b>107.6</b> | <b>110.0</b> | <b>106.0</b> |

(a) Reference base year 1989–90 = 100.0. (b) The index is on a net basis and relates in concept only to materials that enter Australian manufacturing industry from other sectors of the Australian economy or from overseas.

Source: *Price Indexes of Materials Used in Manufacturing Industries, Australia (6411.0)*.

**19.14 PRICE INDEXES, Articles Produced by Manufacturing Industries(a)(b)**

| Industry                                | 1991–92      | 1992–93      | 1993–94      | 1994–95      | 1995–96      | 1996–97      |
|-----------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Food, beverages and tobacco             | 112.3        | 116.2        | 120.5        | 123.0        | 125.9        | 127.2        |
| Textiles                                | 102.9        | 101.8        | 102.2        | 105.6        | 106.3        | 106.8        |
| Clothing and footwear                   | 114.9        | 116.1        | 117.1        | 118.3        | 121.4        | 122.8        |
| Wood, wood products and furniture       | 114.2        | 116.5        | 122.5        | 126.1        | 127.1        | 128.0        |
| Paper, paper products and printing      | 117.3        | 119.9        | 122.0        | 125.2        | 132.9        | 135.6        |
| Chemicals and chemical products         | 109.9        | 111.1        | 110.3        | 113.6        | 117.0        | 116.1        |
| Petroleum products                      | 134.3        | 143.9        | 127.2        | 120.9        | 125.0        | 130.1        |
| Non-metallic mineral products           | 119.3        | 119.3        | 120.8        | 124.2        | 124.6        | 125.3        |
| Basic metal products                    | 99.9         | 100.6        | 99.8         | 107.2        | 109.9        | 103.7        |
| Fabricated metal products               | 114.3        | 114.7        | 114.8        | 116.2        | 119.2        | 120.7        |
| Transport equipment                     | 112.7        | 116.0        | 119.1        | 120.7        | 122.3        | 121.8        |
| Other machinery and equipment           | 107.0        | 109.3        | 109.9        | 111.2        | 112.4        | 113.5        |
| Miscellaneous manufacturing products    | 107.8        | 109.6        | 112.4        | 116.1        | 119.7        | 120.8        |
| <b>All Manufacturing Industry Index</b> | <b>111.6</b> | <b>114.3</b> | <b>115.5</b> | <b>118.1</b> | <b>121.1</b> | <b>121.7</b> |

(a) Reference base year 1988–89 = 100.0. (b) For a full description of Division C, Manufacturing and the subdivisions within the Manufacturing Division, see Australian Standard Industrial Classification (ASIC) (1201.0), 1983 edition.

Source: *Price Indexes of Articles Produced by Manufacturing Industry, Australia (6412.0)*.

## Research and experimental development

Research and experimental development (R&D) activity in the business context is defined as systematic investigation or experimentation involving innovation or technical risk, the outcome of which is new knowledge, with or without a specific practical application or new or improved products, processes, materials, devices or services. R&D activity also extends to modifications to existing products/processes.

As table 19.15 shows, total expenditure by manufacturers on R&D in 1995–96 increased by 26% over expenditure in 1994–95. With the exception of Textile, clothing, footwear and leather manufacturing (down 25%), all manufacturing industries recorded increases. Most notable increases were by Wood and paper product manufacturing and Food, beverage and tobacco manufacturing, both of which more than doubled their expenditure (up 130% and 106% respectively).

## 19.15 EXPENDITURE ON RESEARCH AND DEVELOPMENT, Manufacturing Enterprises

| Industry subdivision                                               | 1994-95<br>\$m | 1995-96<br>Type of expenditure |                    |                              |                |
|--------------------------------------------------------------------|----------------|--------------------------------|--------------------|------------------------------|----------------|
|                                                                    |                | Capital<br>expenditure         | Labour<br>costs(a) | Other current<br>expenditure | Total          |
|                                                                    |                | \$m                            | \$m                | \$m                          | \$m            |
| Food, beverage and tobacco manufacturing                           | 141.8          | 77.6                           | 77.9               | 137.1                        | 292.6          |
| Textile, clothing, footwear and leather manufacturing              | 28.0           | 1.1                            | 9.3                | 10.6                         | 21.0           |
| Wood and paper product manufacturing                               | 79.3           | n.p.                           | n.p.               | 142.4                        | 182.1          |
| Printing, publishing and recorded media manufacturing              | 15.1           | 2.8                            | 10.7               | 6.8                          | 20.3           |
| Petroleum, coal, chemical and associated product manufacturing     | 320.1          | 49.3                           | 136.9              | 161.7                        | 348.0          |
| Non-metallic mineral product manufacturing                         | 45.3           | n.p.                           | n.p.               | 36.9                         | 80.3           |
| Metal product manufacturing                                        | 324.1          | 41.8                           | 120.6              | 172.6                        | 335.0          |
| Motor vehicle and part and other transport equipment manufacturing | 336.5          | 25.9                           | 153.9              | 229.1                        | 408.9          |
| Photographic and scientific equipment manufacturing                | 126.3          | 9.3                            | 70.8               | 53.9                         | 134.0          |
| Electronic and electrical equipment and appliance manufacturing    | 415.1          | 35.6                           | 222.6              | 222.3                        | 480.3          |
| Industrial machinery and equipment manufacturing                   | 80.8           | 6.2                            | 46.7               | 54.1                         | 107.0          |
| Other manufacturing                                                | 19.2           | 2.1                            | 9.2                | 9.2                          | 20.5           |
| <b>Total manufacturing</b>                                         | <b>1 931.6</b> | <b>298.4</b>                   | <b>894.8</b>       | <b>1 236.8</b>               | <b>2 429.9</b> |

(a) Includes wages and salaries, payroll tax, payments to contract staff on the payroll, fringe benefits tax and workers' compensation, holiday pay, long service leave payments, sick pay, and employer contributions to superannuation and pension schemes.

Source: Research and Experimental Development, Business Enterprises, Australia (8104.0).

Manufacturers in the Electronic and electrical equipment and appliance industry accounted for 20% of all manufacturing research and development expenditure in 1995-96. Motor vehicles and parts and other transport equipment manufacturing (17%), Petroleum, coal, chemical and associated product manufacturing (14%) and Metal product manufacturing (14%) were also major contributors to R&D expenditure.

### Direct exports by manufacturers

Table 19.16 shows the proportions of manufacturing employment and turnover accounted for by manufacturing establishments, classified by the extent to which they directly engage in exporting activity. It also shows the value of those direct exports as a percentage of total sales of goods produced.

Generally, exporting establishments have higher turnover per person employed than non-exporting establishments. In 1994-95, establishments which undertook some

exporting had 41% of manufacturing employment but contributed almost 54% of manufacturing turnover. Industries where exporting establishments contributed the most to industry turnover were Machinery and equipment manufacturing (69%) and Metal product manufacturing (63%). Industries where exporting establishments contributed least to industry turnover were Printing, publishing and recorded media (18%) and Other manufacturing (22%). On average, exporting establishments showed higher wages and salaries per person employed than non-exporting establishments.

Overall, manufacturers directly exported almost 14% of the goods that they produced in 1994-95. Industries with the highest levels of direct exporting were Metal product manufacturing (24%) and Food, beverage and tobacco manufacturing (17%). Industries which exported less than 5% of the goods they produced were Non-metallic mineral product manufacturing (3.7%), Printing, publishing and recorded media (3.4%) and Other manufacturing (3.3%).

**19.16 MANUFACTURING ESTABLISHMENTS, Summary of Operations by Proportion of Exports — 1994–95**

| Industry subdivision                                           | Establishments that do not export |             | Establishments with exports up to and including 50% of sales of goods that they produced |             | Establishments with exports of more than 50% of sales of goods that they produced |            | Exports as a % of sales of goods produced |
|----------------------------------------------------------------|-----------------------------------|-------------|------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------|------------|-------------------------------------------|
|                                                                | Employment at end of June(a)      | Turnover    | Employment at end of June(a)                                                             | Turnover    | Employment at end of June(a)                                                      | Turnover   |                                           |
|                                                                | %                                 | %           | %                                                                                        | %           | %                                                                                 | %          | %                                         |
| Food, beverage and tobacco manufacturing                       | 51.9                              | 43.7        | 34.4                                                                                     | 40.6        | 13.6                                                                              | 15.8       | 17.1                                      |
| Textile, clothing, footwear and leather manufacturing          | 64.9                              | 55.0        | 29.7                                                                                     | 33.9        | 5.3                                                                               | 11.1       | 12.1                                      |
| Wood and paper product manufacturing                           | 75.1                              | 63.4        | 24.0                                                                                     | 33.6        | 0.9                                                                               | 3.1        | 5.6                                       |
| Printing, publishing and recorded media                        | 86.5                              | 81.9        | 13.1                                                                                     | 15.6        | 0.4                                                                               | 2.5        | 3.4                                       |
| Petroleum, coal, chemical and associated product manufacturing | 49.5                              | 40.3        | 48.5                                                                                     | 57.7        | 2.0                                                                               | 2.1        | 7.4                                       |
| Non-metallic mineral product manufacturing                     | 69.6                              | 71.7        | 29.1                                                                                     | 26.4        | 1.4                                                                               | 1.9        | 3.7                                       |
| Metal product manufacturing                                    | 54.1                              | 37.5        | 36.8                                                                                     | 43.5        | 9.0                                                                               | 19.1       | 24.0                                      |
| Machinery and equipment manufacturing                          | 45.0                              | 31.1        | 48.9                                                                                     | 61.8        | 6.2                                                                               | 7.1        | 15.0                                      |
| Other manufacturing                                            | 81.5                              | 77.7        | 16.9                                                                                     | 20.1        | 1.6                                                                               | 2.2        | 3.3                                       |
| <b>Total manufacturing</b>                                     | <b>59.1</b>                       | <b>46.2</b> | <b>34.9</b>                                                                              | <b>44.2</b> | <b>6.1</b>                                                                        | <b>9.6</b> | <b>13.7</b>                               |

(a) Includes working proprietors.

Source: *Manufacturing Industry, Australia* (8221.0).

## Commonwealth Government authorities

*Year Book Australia, 1994* contains an outline of the roles and responsibilities of the former Industry Commission, the former Bureau of Industry Economics, and the former Department of Industry, Technology and Regional Development, the industry-related responsibilities of which are now the responsibility of the Department of Industry, Science and Tourism.

The Productivity Commission now undertakes functions formerly carried out by the Bureau of Industry Economics, the Economic Planning and Advisory Council and the Industry Commission. The main activities of the Productivity Commission fall into five broad categories:

- major projects linked to public enquiries, task forces and program evaluations commissioned by government;
- performance monitoring of economic infrastructure and government service provision related to the agenda of the Council of Australian Governments;
- domestic and international benchmarking of economic infrastructure and government provided services;
- review of regulation through the Office of Regulation Review and related research; and
- a complementary program of research encompassing projects of varying duration, form and subject matter.

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*Private New Capital Expenditure, Australia, Actual and Expected Expenditure* (5626.0).

*Research and Experimental Development, Business Enterprises, Australia* (8104.0).

*Stocks and Sales, Selected Industries, Australia* (5629.0).

*Trade Union Members, Australia* (6325.0).



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## Introduction

The construction industry has a major influence on every Australian. It provides the homes in which we live, the places in which most of us work and play, our schools and hospitals, and the infrastructure such as roads, water and electricity supply, and telecommunications, essential for our day to day living. A number of other parts of the Australian economy are also closely linked to the construction industry and its activities. These include in particular, parts of the manufacturing, wholesale and retail trade and finance industries, in financing construction, and supplying components, fittings and furnishings. Parts of the professional services industry — such as the architectural and engineering professions — are also closely linked to the construction industry.

The construction industry engages in three broad areas of activity: residential building (houses, flats, etc.), non-residential building (offices, shops, hotels, etc.), and engineering construction (roads, bridges, water and sewerage, etc.). Construction activity is undertaken by both the private and public sectors in Australia. The private sector is engaged in all three categories of construction, and plays the major role in residential and other building activity. The public sector plays a key role in initiating and undertaking engineering construction activity and building activity relating to health and education.

In 1996–97 the construction industry contributed about 6% to the gross product of all

industries, as measured by production-based Gross Domestic Product (at average 1989–90 prices). It employed 586,000 people, either as employees or as self employed contractors. This was 7% of the employment in all industries.

## Trends in the construction industry

Trends over recent years in the level of activity of the construction industry as a whole are shown below.

In the 1996–97 financial year, estimated construction activity in current prices was \$43,467m. In average 1989–90 prices this was \$40,509m, 4% above the 1995–96 estimate of \$38,994m. A fall of 1% in residential building activity, from \$14,458m in 1995–96 to \$14,338m in 1996–97, was more than offset by increases in non-residential building activity and engineering construction activity. Non-residential building activity rose by 10% from \$11,616m in 1995–96 to \$12,823m in 1996–97. Engineering construction rose by 3% from \$12,920m in 1995–96 to \$13,348m in 1996–97 (table 20.1).

The largest contribution to total construction activity in 1996–97 was by residential building, with 35% of the total, while engineering construction and non-residential building accounted for 33% and 32% respectively. In 1995–96 residential building had accounted for 37% of total construction, with engineering construction and non-residential building accounting for 33% and 30% respectively.

**20.1 CONSTRUCTION ACTIVITY, At Average 1989–90 Prices**

| Financial year | Residential building<br>\$m | Non-residential building<br>\$m | Engineering construction<br>\$m | Total construction<br>\$m |
|----------------|-----------------------------|---------------------------------|---------------------------------|---------------------------|
| 1990–91        | 12 828                      | 13 588                          | 11 128                          | 37 544                    |
| 1991–92        | 12 911                      | 10 386                          | 10 337                          | 33 634                    |
| 1992–93        | 15 149                      | 9 285                           | 10 626                          | 35 059                    |
| 1993–94        | 16 676                      | 9 112                           | 11 509                          | 37 296                    |
| 1994–95        | 17 402                      | 10 216                          | 11 791                          | 39 410                    |
| 1995–96        | 14 458                      | 11 616                          | 12 920                          | 38 994                    |
| 1996–97        | 14 338                      | 12 823                          | 13 348                          | 40 509                    |

Source: *Building Activity, Australia* (8752.0); *Engineering Construction Activity, Australia* (8762.0).

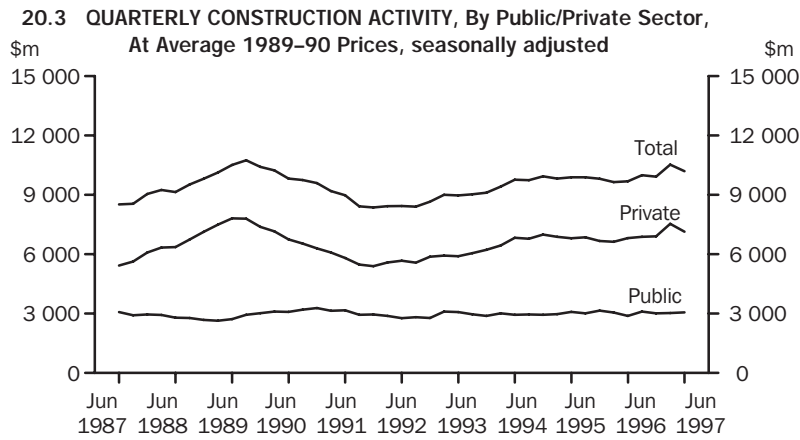
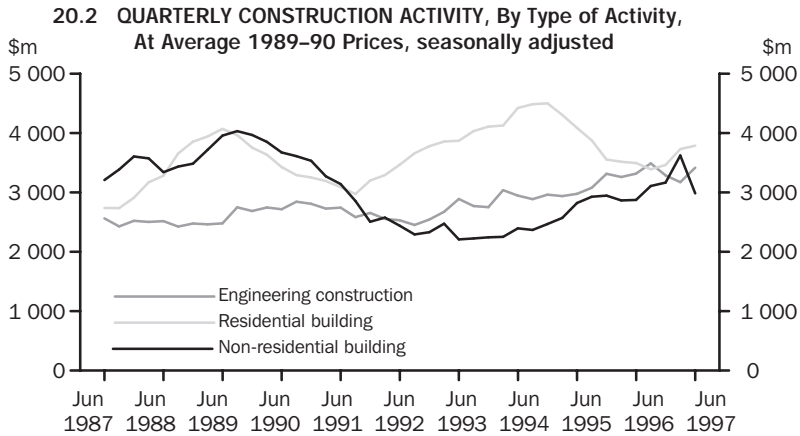
The quarterly data in graph 20.2 show a sharp rise and decline in non-residential building in 1997, mainly reflecting activity in Victoria in relation to the Casino Complex in early 1997.

Of the \$40,509m of construction expenditure in 1996–97, \$28,359m (70%) was work done for the private sector. Of this, \$13,819m (49%) was on residential building, \$9,524m (34%) on non-residential building and the remaining \$5,017m (18%) on engineering construction.

Public sector construction expenditure showed a different pattern, with \$8,331m (69%) out of a

total expenditure of \$12,150m being spent on engineering construction. Non-residential building (\$3,299m) accounted for 27% of total expenditure, with \$519m (4%) being spent on residential building.

Construction activity for the public sector has remained relatively constant at around \$3,000m each quarter over the last ten years (graph 20.3). The volatility evident in total construction series is mainly due to private sector construction activity.



## Residential building

Residential building involves the construction of dwelling units, which comprise new houses, new other residential buildings (flats, apartments, villa units, townhouses, duplexes, etc.), and dwellings created as part of alterations and additions to existing buildings (including conversions to dwelling units) and as part of the construction of non-residential buildings.

The trend for total dwelling unit approvals grew for three and a half years from February 1991, peaking in July 1994 (graph 20.4). The trend then declined continuously to December 1995, to a level almost 40% below the July 1994 peak. The trend for total dwelling units approved was relatively flat between December 1995 and June 1996. There was some growth between June 1996 and June 1997. Approvals for separate houses, which account for about 70% of all dwelling units approved, followed a similar pattern, although they showed a slight decline to June 1996, with growth resuming during 1996–97.

## New houses

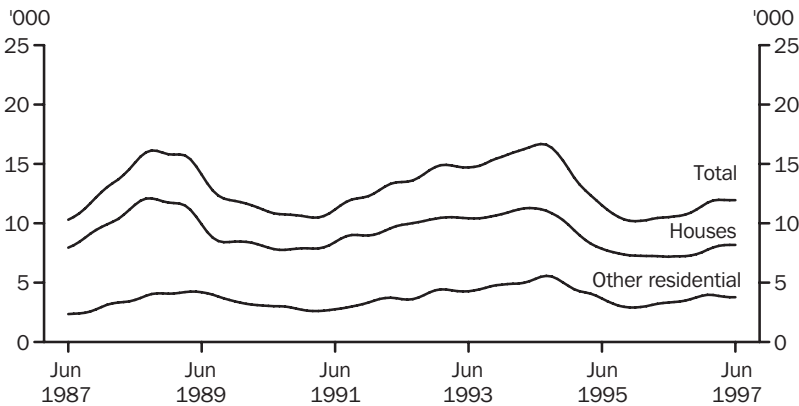
Graph 20.5 illustrates the cyclical pattern of new house commencements. Lows were recorded in 1990–91 and 1996–97, with peaks in 1988–89 and 1993–94. New house construction grew throughout 1992–93 and 1993–94, the number of commencements peaking in the June quarter 1994. New house commencements fell in each quarter of 1994–95 and 1995–96, but have grown in each quarter of 1996–97. House completions generally follow a similar pattern to commencements.

The number of new houses approved in 1996–97 was 92,773 (table 20.6), an increase of 6% from the 1995–96 figure of 87,557. Private sector approvals were 98% of the total number of new houses approved.

The estimated number of new houses commenced in 1996–97 was 85,967, a slight fall from the number in 1995–96 of 86,174.

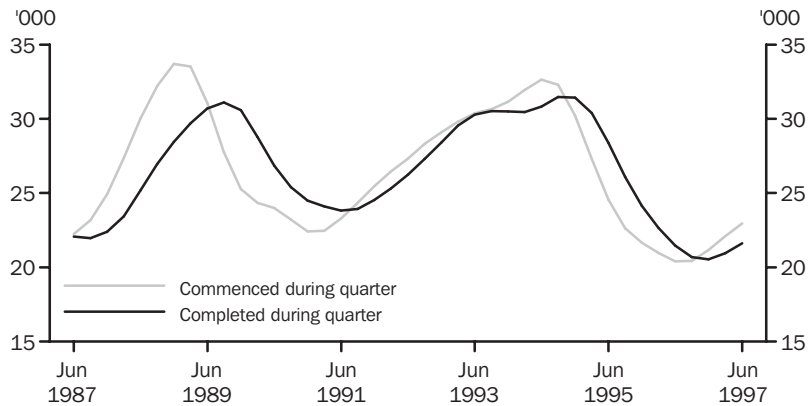
New house completions (83,427) fell by 12% from the 94,810 houses completed in 1995–96.

20.4 NUMBER OF DWELLING UNITS APPROVED, Trend Estimates



Source: Building Approvals, Australia (8731.0).

20.5 NUMBER OF NEW HOUSES CONSTRUCTED, Trend Estimates



Source: *Building Activity, Australia* (8752.0).

20.6 RESIDENTIAL BUILDING, 1996–97

|                | New houses<br>no. | New other residential building<br>no. | Conversions, etc.<br>no. |
|----------------|-------------------|---------------------------------------|--------------------------|
| Private sector |                   |                                       |                          |
| Approved       | 91 001            | 36 972                                | 3 546                    |
| Commenced      | 84 368            | 34 475                                | 3 443                    |
| Completed      | 81 851            | 31 116                                | 2 369                    |
| Public sector  |                   |                                       |                          |
| Approved       | 1 772             | 3 469                                 | 130                      |
| Commenced      | 1 599             | 3 366                                 | 141                      |
| Completed      | 1 576             | 4 436                                 | 89                       |
| <b>Total</b>   |                   |                                       |                          |
| Approved       | 92 773            | 40 441                                | 3 676                    |
| Commenced      | 85 967            | 37 841                                | 3 584                    |
| Completed      | 83 427            | 35 552                                | 2 458                    |

Source: *Building Approvals, Australia* (8731.0), *Building Activity, Australia* (8752.0).

dwelling units approved, 36,972 (91%) were owned by the private sector. In 1996–97 approvals of new other residential dwelling units owned by the public sector (3,469) were 10% fewer than in 1995–96 (3,862). Of the 40,441 new other residential dwelling units approved in 1996–97, 49% were semi-detached, row or terrace houses, townhouses, etc. (57% in 1995–96), while 51% were flats, units or apartments, etc. (43% in 1995–96).

There has been an increase in new other residential building activity in recent years, both in absolute terms and as a percentage of total housing activity. The number of approvals of new other residential dwelling units, expressed as a proportion of total dwelling unit approvals, rose from 26% in 1991–92 to 27% in 1992–93, 29% in 1993–94 and 31% in 1994–95. While this proportion fell to 29% of total dwelling unit approvals in 1995–96, it rose to 30% in 1996–97.

The number of new other residential dwelling units commenced in Australia during 1996–97 was 37,841, an increase of 5% from the 36,130 units commenced in 1995–96.

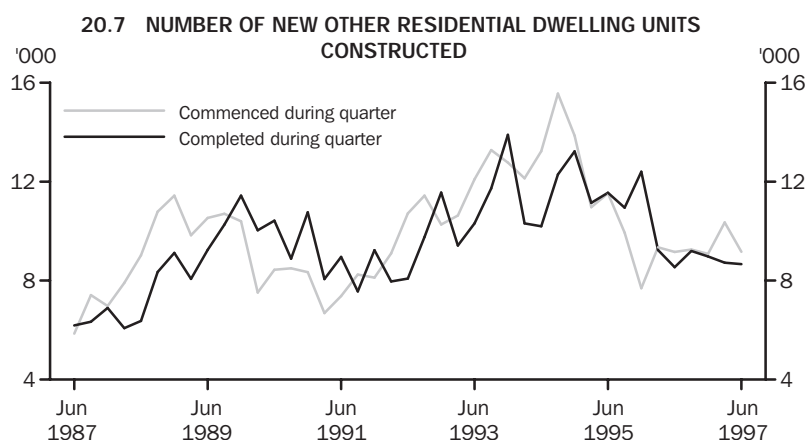
New other residential dwelling unit completions in 1996–97 totalled 35,552, a fall of 14% from the 41,121 completions in 1995–96.

Graph 20.7 shows the number of new other residential dwelling units commenced and completed over the last decade. Despite quarter to quarter volatility, it can be seen that the completions series generally has lagged the commencements series by one to two quarters.

### New other residential building

The level of activity of other residential building construction is highly variable and does not follow the regular pattern experienced in house construction. This is because of the generally larger size of other residential building construction jobs and the varying extent of speculative building of private townhouses, flats, home units and similar residential building projects over time.

In 1996–97, 40,441 new other residential dwelling units were approved (table 20.6), an increase of 15% from the 35,137 units approved in 1995–96. Of the 40,441 new other residential



### Other dwellings

Apart from the construction of new residential buildings, dwellings can be created as part of alterations and additions to existing buildings (including conversions to dwelling units) and as part of the construction of non-residential buildings.

Table 20.6 shows that 3,676 such dwelling units were approved in 1996–97, an increase of 82% from the 2,017 units approved in 1995–96.

The number of dwelling units commenced in Australia during 1996–97 as part of alterations and additions to existing buildings (including conversions to dwelling units) and as part of the construction of non-residential buildings was 3,584, 51% more than the 2,381 units commenced in 1995–96. Of these dwellings commenced in 1996–97, 1,673 (47%) were in New South Wales and 1,132 (32%) in Victoria.

Dwelling unit completions as part of alterations and additions to existing buildings (including conversions to dwelling units), and as part of the construction of non-residential buildings, totalled 2,458 in 1996–97, a fall of 16% from the 2,931 units completed in 1995–96.

### Value of residential building

As table 20.8 shows, approvals for total new residential building were valued at \$13,709m in 1996–97, 13% above the 1995–96 value of \$12,119m. New house approvals were valued

at \$9,907m, 12% above the 1995–96 value of \$8,812m. The value of new house approvals in 1996–97 represented 72% of the total value of new residential building approvals, compared with 73% in 1995–96. The value of new other residential building approvals in 1996–97 was \$3,802m, a rise of 15% from the 1995–96 value of \$3,306m. Approvals for alterations and additions to residential buildings totalled \$2,555m in 1996–97, a 12% rise from the 1995–96 figure (\$2,284m).

The value of work done on new residential buildings in 1996–97 was \$12,997m, making up 46% of the total value of all building work done. The value of work done on alterations and additions to residential buildings was \$2,567m.

**20.8 VALUE OF RESIDENTIAL BUILDING,  
1996–97**

|                                                       | Approved | Work done |
|-------------------------------------------------------|----------|-----------|
|                                                       | \$m      | \$m       |
| New residential buildings                             |          |           |
| New houses                                            | 9 907    | 9 266     |
| New other residential buildings                       | 3 802    | 3 731     |
| Total new residential buildings                       | 13 709   | 12 997    |
| Alterations and additions to residential buildings(a) | 2 555    | 2 567     |

(a) Valued at \$10,000 or more.

Source: *Building Approvals, Australia (8731.0)*, *Building Activity, Australia (8752.0)*.

## Non-residential building

The value of non-residential building approved in Australia in 1996–97 was \$12,724m, a 19% increase from the 1995–96 value of \$10,729m (table 20.9). The value of approvals increased in all categories except Other business premises and Religious buildings, which fell by \$118m (7%) and \$30m (35%) respectively. In percentage terms, the largest rise was in the approval of Entertainment and recreational buildings, from \$937m to \$1,325m (41%). Other significant increases were in Hotels etc, up \$255m to \$913m (39%), Health, up \$218m to \$984m (28%) and Offices which rose by \$494m to \$2,295m (27%).

The total value of work done on non-residential building in 1996–97 was \$12,689m, an increase of 12% from the 1995–96 value of \$11,339m. This follows a 16% increase from 1994–95 to 1995–96. All categories of non-residential building recorded increases in the value of work done in 1996–97, except work done on Religious buildings which fell by 6%. Significant increases were recorded in the categories Hotels (56%), Factories (23%), Health (23%), and

Entertainment and recreational buildings (15%). There were also small increases in the categories Educational buildings (8%), Offices (6%), Other business premises (6%) and Shops (2%).

## Building activity at constant prices

Estimates at average 1989–90 prices of the value of residential and non-residential building work done are presented in table 20.10. Constant price estimates measure changes in value after the direct effects of price changes have been eliminated.

At average 1989–90 prices, the value of building work done rose by \$1,087m (4%) to \$27,161m in 1996–97, following a fall of 6% in 1995–96.

This increase was entirely due to a 10% rise in non-residential building activity, from \$11,616m in 1995–96 to \$12,823m in 1996–97; this more than offset the small fall in residential building (including alterations and additions). The value of work done on new houses fell by 1% to \$8,287m, work done on new other residential buildings fell by 0.3% to \$3,765m, and work done on alterations and additions to residential buildings fell by 0.2% to \$2,286m.

20.9 VALUE OF NON-RESIDENTIAL BUILDING

|                                          | 1995–96       |               | 1996–97       |               |
|------------------------------------------|---------------|---------------|---------------|---------------|
|                                          | Approved      | Work done     | Approved      | Work done     |
|                                          | \$m           | \$m           | \$m           | \$m           |
| Hotels, etc.                             | 658           | 638           | 913           | 997           |
| Shops                                    | 1 811         | 2 072         | 2 182         | 2 119         |
| Factories                                | 989           | 1 000         | 1 138         | 1 231         |
| Offices                                  | 1 801         | 1 764         | 2 295         | 1 867         |
| Other business premises                  | 1 720         | 1 667         | 1 602         | 1 768         |
| Educational                              | 1 255         | 1 277         | 1 412         | 1 374         |
| Religious                                | 86            | 83            | 56            | 78            |
| Health                                   | 766           | 727           | 984           | 897           |
| Entertainment and recreational           | 937           | 1 384         | 1 325         | 1 598         |
| Miscellaneous                            | 706           | 727           | 817           | 759           |
| <b>Total non-residential building(a)</b> | <b>10 729</b> | <b>11 339</b> | <b>12 724</b> | <b>12 689</b> |

(a) Valued at \$50,000 or more.

Source: *Building Approvals, Australia* (8731.0); *Building Activity, Australia* (8752.0).



**20.10 VALUE OF BUILDING WORK DONE, At Average 1989–90 Prices**

|         | New residential building |                             |        |                                                    |                          | Total building |
|---------|--------------------------|-----------------------------|--------|----------------------------------------------------|--------------------------|----------------|
|         | Houses                   | Other residential buildings | Total  | Alterations and additions to residential buildings | Non-residential building |                |
|         | \$m                      | \$m                         | \$m    | \$m                                                | \$m                      | \$m            |
| 1991–92 | 8 525                    | 2 445                       | 10 970 | 1 941                                              | 10 386                   | 23 296         |
| 1992–93 | 9 815                    | 3 273                       | 13 088 | 2 060                                              | 9 285                    | 24 434         |
| 1993–94 | 10 652                   | 3 844                       | 14 496 | 2 180                                              | 9 112                    | 25 788         |
| 1994–95 | 10 520                   | 4 508                       | 15 028 | 2 375                                              | 10 216                   | 27 619         |
| 1995–96 | 8 392                    | 3 776                       | 12 168 | 2 290                                              | 11 616                   | 26 074         |
| 1996–97 | 8 287                    | 3 765                       | 12 052 | 2 286                                              | 12 823                   | 27 161         |

Source: *Building Activity, Australia* (8752.0).

## Price indexes of materials used in building

Two price indexes measure the changes in prices of selected materials used in the construction of buildings. These are described below.

### Price index of materials used in house building

The All groups index (weighted average of the six State capital cities) increased by 0.3% (or

0.4 index points) from 1995–96 to 1996–97. This follows a similar increase of 0.3% (0.3 index points) in the previous financial year (table 20.11).

Increases were recorded in the index in Adelaide (up 2.0%), Perth (up 0.5%), Sydney (up 0.3%) and Brisbane (up 0.2%). The index fell in the other capital cities with Hobart down 0.4% and Melbourne down 0.1%.

**20.11 PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING, Six State Capital Cities(a)(b)**

| Financial year | Weighted average of six State capital cities | Sydney | Melbourne | Brisbane | Adelaide | Perth | Hobart |
|----------------|----------------------------------------------|--------|-----------|----------|----------|-------|--------|
| 1991–92        | 104.9                                        | 105.0  | 102.8     | 107.9    | 104.5    | 106.0 | 108.0  |
| 1992–93        | 106.9                                        | 106.8  | 105.7     | 110.2    | 106.3    | 106.9 | 109.9  |
| 1993–94        | 112.0                                        | 111.3  | 112.1     | 113.5    | 117.1    | 109.1 | 112.8  |
| 1994–95        | 115.4                                        | 115.0  | 115.9     | 115.9    | 118.8    | 112.7 | 117.3  |
| 1995–96        | 115.7                                        | 115.9  | 115.4     | 115.1    | 118.2    | 114.7 | 120.7  |
| 1996–97        | 116.1                                        | 116.3  | 115.3     | 115.3    | 120.6    | 115.3 | 120.2  |

(a) Reference base year 1989–90 = 100.0. (b) The separate city indexes measure price movement within each city individually. They do not compare price levels between cities.

Source: *Price Index of Materials Used in House Building, Six State Capital Cities* (6408.0).

## Price index of materials used in building other than house building

The All groups index (weighted average of the six State capital cities) increased by 0.4% (or 0.5 index points) from 1995–96 to 1996–97. This follows an increase of 2.1% (2.3 index points) between 1994–95 and 1995–96 (table 20.12). The index rose in all capital cities except Melbourne, which recorded a 0.2% fall. The largest increases occurred in Adelaide and Perth (both up 1.2%) and Hobart (up 1.0%). Brisbane recorded a 0.8%

increase. The smallest rise of all capital cities was in Sydney, where the index rose by 0.4%.

Table 20.13 shows index numbers for selected materials used in building other than house building, over the years 1991–92 to 1996–97. The small rise in the All groups index in 1996–97 was a result of a large rise (5.0% or 6.5 index points) in Paint and other coatings, together with smaller rises in Steel decking cladding and sheet products, Structural steel and Aluminium windows, which countered falls in all other categories.

**20.12 PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING, Six State Capital Cities(a)(b)**

| Financial year | Weighted average of six State capital cities | Sydney | Melbourne | Brisbane | Adelaide | Perth | Hobart |
|----------------|----------------------------------------------|--------|-----------|----------|----------|-------|--------|
| 1991–92        | 105.7                                        | 107.2  | 103.4     | 107.4    | 105.4    | 105.2 | 107.1  |
| 1992–93        | 106.0                                        | 106.5  | 104.4     | 108.9    | 105.1    | 105.7 | 108.2  |
| 1993–94        | 107.5                                        | 107.0  | 106.7     | 110.1    | 107.9    | 107.1 | 110.1  |
| 1994–95        | 110.4                                        | 110.3  | 108.9     | 112.9    | 110.9    | 110.1 | 112.2  |
| 1995–96        | 112.7                                        | 112.5  | 111.1     | 115.0    | 112.7    | 113.2 | 115.1  |
| 1996–97        | 113.2                                        | 113.0  | 110.9     | 115.9    | 114.1    | 114.6 | 116.3  |

(a) Reference base year 1989–90 = 100.0. (b) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

Source: Price Index of Materials Used in Building Other than House Building, Six State Capital Cities (6407.0).

**20.13 PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING(a)**

| Material                                  | 1991–92      | 1992–93      | 1993–94      | 1994–95      | 1995–96      | 1996–97      |
|-------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Structural timber                         | 100.3        | 107.1        | 127.1        | 128.3        | 120.5        | 116.4        |
| Clay bricks                               | 105.0        | 106.2        | 107.8        | 111.0        | 110.0        | 108.7        |
| Ready mixed concrete                      | 106.0        | 103.5        | 106.7        | 112.4        | 108.2        | 106.6        |
| Steel decking cladding and sheet products | 106.6        | 108.4        | 107.5        | 108.9        | 110.9        | 112.9        |
| Structural steel                          | 100.7        | 101.2        | 104.3        | 105.3        | 109.3        | 112.5        |
| Reinforcing steel bar fabric and mesh     | 105.7        | 109.2        | 112.7        | 111.5        | 112.0        | 111.6        |
| Aluminium windows                         | 99.5         | 99.1         | 99.7         | 105.4        | 108.4        | 108.5        |
| Non-ferrous pipes and fittings            | 100.8        | 104.6        | 102.4        | 118.1        | 129.4        | 128.8        |
| Builders' hardware                        | 109.8        | 112.6        | 115.3        | 116.6        | 119.5        | 118.3        |
| Paint and other coatings                  | 116.7        | 118.2        | 119.9        | 123.3        | 129.1        | 135.6        |
| <b>All Groups</b>                         | <b>105.7</b> | <b>106.0</b> | <b>107.5</b> | <b>110.4</b> | <b>112.7</b> | <b>113.2</b> |

(a) Reference base year 1989–90 = 100.0.

Source: Price Index of Materials Used in Building Other Than House Building, Six State Capital Cities (6407.0).

## Average weekly earnings in the construction industry

Average weekly earnings represent, in part, the cost of labour in the construction industry. This complements the information provided in the previous section on the cost of materials in the industry.

In August 1997, average weekly earnings for full-time adult employees in the construction industry were \$791.60, compared with the average across all industries of \$746.10 (table 20.14). For full-time adult construction employees, this represented a 3.5% increase in the 12 months to August 1997, after a 4.5% increase in the previous year. The rate of increase across all industries in the 12 months to August 1997 was 4.0%, after a 3.8% increase in the 12 months to August 1996.

The average weekly earnings for full-time adult employees, in construction and in all industries, are higher than the average for all employees because of the effect of part-time workers on the estimates.

## Engineering construction

This section contains estimates of engineering construction activity in Australia for both public and private sector organisations. These estimates, together with the preceding data on residential and non-residential building, complete the picture of construction activity in Australia.

The total value of engineering construction work done during 1996–97 was \$15,215m, a \$629m (4%) rise on the 1995–96 estimate of \$14,586m (table 20.15). Engineering construction work done for the public sector rose by \$58m (1%) to \$9,527m and work done for the private sector increased by \$571m (11%) to \$5,688m.

Overall, the highest expenditure occurred on Roads, highways and subdivisions (30% of the total value of engineering construction work done), Telecommunications (18%), Heavy industry (16%) and Electricity generation, transmission and distribution (10%).

In terms of work done for the public sector, engineering construction activity centred on Roads, highways and subdivisions (32% of total public sector activity, compared with 34% in 1995–96), Telecommunications (27%, down from 28% in 1995–96), Railways (13%, up from 10% in 1995–96) and Electricity generation, transmission and distribution (11%, up from 10% in 1995–96).

For the private sector, major construction activity was undertaken in Heavy industry, which rose by \$192m to \$2,348m (41% of total private sector expenditure in 1996–97), and Roads, highways and subdivisions, which rose by \$360m to \$1,463m (26%). Expenditure on Roads, highways and subdivisions accounted for a smaller proportion and Railways an increased proportion compared with 1995–96.

**20.14 AVERAGE WEEKLY EARNINGS, All Employees**

|             | Construction              |               | All Industries            |               |
|-------------|---------------------------|---------------|---------------------------|---------------|
|             | Full-time adult employees | All employees | Full-time adult employees | All employees |
|             | \$                        | \$            | \$                        | \$            |
| August 1992 | 633.2                     | 564.4         | 616.6                     | 503.9         |
| August 1993 | 648.3                     | 582.7         | 636.1                     | 520.6         |
| August 1994 | 694.5                     | 638.4         | 661.0                     | 537.2         |
| August 1995 | 731.7                     | 658.2         | 691.2                     | 547.8         |
| August 1996 | 764.7                     | 691.4         | 717.2                     | 566.7         |
| August 1997 | 791.6                     | 699.2         | 746.1                     | 582.2         |

Source: Average Weekly Earnings (6302.0).

## 20.15 VALUE OF ENGINEERING CONSTRUCTION WORK DONE

|                                                       | 1995-96                |                       |               | 1996-97                |                       |               |
|-------------------------------------------------------|------------------------|-----------------------|---------------|------------------------|-----------------------|---------------|
|                                                       | For the private sector | For the public sector | Total         | For the private sector | For the public sector | Total         |
|                                                       | \$m                    | \$m                   | \$m           | \$m                    | \$m                   | \$m           |
| Roads, highways and subdivisions                      | 1 103                  | 3 221                 | 4 324         | 1 463                  | 3 068                 | 4 530         |
| Bridges                                               | 37                     | 193                   | 230           | 34                     | 188                   | 222           |
| Railways                                              | 61                     | 994                   | 1 055         | 80                     | 1 239                 | 1 317         |
| Harbours                                              | 24                     | 82                    | 106           | 80                     | 173                   | 253           |
| Water storage and supply                              | 253                    | 371                   | 625           | 121                    | 309                   | 336           |
| Sewerage and drainage                                 | 148                    | 482                   | 629           | 75                     | 409                   | 484           |
| Electricity generation, transmission and distribution | 443                    | 922                   | 1 365         | 411                    | 1 089                 | 1 500         |
| Pipelines                                             | 271                    | 323                   | 594           | 235                    | 101                   | 335           |
| Recreation                                            | 389                    | 178                   | 567           | 641                    | 194                   | 835           |
| Telecommunications                                    | 194                    | 2 626                 | 2 820         | 166                    | 2 617                 | 2 783         |
| Heavy industry                                        | 2 156                  | 67                    | 2 222         | 2 348                  | 128                   | 2 476         |
| Other                                                 | 37                     | 12                    | 50            | 36                     | 12                    | 48            |
| <b>Total</b>                                          | <b>5 117</b>           | <b>9 469</b>          | <b>14 586</b> | <b>5 688</b>           | <b>9 527</b>          | <b>15 215</b> |

Source: *Engineering Construction Activity, Australia* (8762.0).

## Industrial disputes

Of the 543 industrial disputes during 1996, 69 or 13% affected the construction industry (table 20.16). These 69 disputes involved (either directly or indirectly) 197,700 construction industry employees and resulted in the loss of 334,800 working days. This represents 36% of the total number of working days lost due to all industrial disputes in Australia in 1996.

### 20.16 INDUSTRIAL DISPUTES DURING 1996, Construction and All Industries

|                                              | Units | Construction | All industries |
|----------------------------------------------|-------|--------------|----------------|
|                                              | no.   | 69           | 543            |
| Total industrial disputes                    |       |              |                |
| Employees involved (directly and indirectly) | '000  | 197.7        | 577.7          |
| Working days lost                            | '000  | 334.8        | 928.5          |

Source: *Industrial Disputes, Australia* (6322.0).

Table 20.17 shows that in 1996 the construction industry recorded an average of 892 working days lost per thousand employees. The Australian Capital Territory, Queensland and Victoria were most strike affected, with 2,023, 1,439 and 1,151 working days lost per thousand construction industry employees, respectively. Western Australia followed with 798 working days lost per thousand of its construction industry employees, then South Australia (660) and New South Wales (469). Tasmania and the

Northern Territory had very little or no strike activity reported in the construction industry.

### 20.17 WORKING DAYS LOST DUE TO INDUSTRIAL DISPUTES, Construction and All Industries — 1996(a)

|       | Construction per '000 employees | All industries per '000 employees |
|-------|---------------------------------|-----------------------------------|
| NSW   | 469                             | 158                               |
| Vic.  | 1 151                           | 122                               |
| Qld   | 1 439                           | 162                               |
| SA    | 660                             | 77                                |
| WA    | 798                             | 68                                |
| Tas.  | —                               | 78                                |
| NT    | 55                              | 59                                |
| ACT   | 2 023                           | 148                               |
| Aust. | 892                             | 131                               |

(a) The basis for the calculation of working days lost per thousand employees was changed in January 1995 to use estimates of employees taken from the ABS Labour Force Survey only.

Source: *Industrial Disputes, Australia* (6322.0).

## Trade union membership

Over the 10 years to 1996, the proportion of construction industry employees who were trade union members fell from almost a half in 1986 to less than a third in 1996.

In 1986, 48% of construction industry employees were trade union members. In more recent years, this percentage fell to 42% in 1992, 35% in 1993, 34% in 1994, 31% in 1995 and 30% in 1996.

This fall in trade union membership was not restricted to the construction industry. As table 20.18 shows, in all industries the estimated trade union membership rate has also fallen steadily, from 40% in 1992 to 38% (1993), 35% (1994), 33% (1995) and 31% in 1996.

**20.18 EMPLOYEES WHO WERE TRADE UNION MEMBERS, Construction Industry — 1992–1996**

|                                                 | Units | Construction | All industries |
|-------------------------------------------------|-------|--------------|----------------|
| August 1992                                     |       |              |                |
| Number of members                               | '000  | 123.9        | 2 508.8        |
| Proportion of employees who are in trade unions | %     | 42.4         | 39.6           |
| August 1993                                     |       |              |                |
| Number of members                               | '000  | 110.1        | 2 376.9        |
| Proportion of employees who are in trade unions | %     | 35.3         | 37.6           |
| August 1994                                     |       |              |                |
| Number of members                               | '000  | 113.4        | 2 283.4        |
| Proportion of employees who are in trade unions | %     | 34.1         | 35.0           |
| August 1995                                     |       |              |                |
| Number of members                               | '000  | 105.1        | 2 251.8        |
| Proportion of employees who are in trade unions | %     | 30.6         | 32.7           |
| August 1996                                     |       |              |                |
| Number of members                               | '000  | 109.9        | 2 194.3        |
| Proportion of employees who are in trade unions | %     | 29.7         | 31.1           |

Source: *Trade Union Members, Australia* (6325.0).

In the construction industry in 1996, 42% of permanent employees who were male belonged to a trade union, while 10% of permanently employed females were trade union members (table 20.19).

**20.19 EMPLOYEES WHO WERE TRADE UNION MEMBERS, Construction Industry — August 1996**

|              | Construction | All industries |
|--------------|--------------|----------------|
|              | %            | %              |
| Males        |              |                |
| Permanent    | 42.1         | 38.8           |
| Casual       | 14.3         | 13.9           |
| Total        | 32.8         | 33.5           |
| Females      |              |                |
| Permanent    | 9.7          | 35.5           |
| Casual       | 2.5          | 12.4           |
| Total        | 6.5          | 28.1           |
| Total        |              |                |
| Permanent    | 38.7         | 37.4           |
| Casual       | 12.5         | 13.1           |
| <b>Total</b> | <b>29.7</b>  | <b>31.1</b>    |

Source: *Trade Union Members, Australia* (6325.0).

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## Introduction

The service industries sector is a significant and growing part of the Australian economy. This chapter presents an overview of the sector and provides a range of statistical information for a selection of service industries, with a particular focus on those that have recently been surveyed as part of the ABS rotating program of service industries collections.

For the purposes of this chapter the service industries sector has been defined as all industries other than the goods producing industries (agriculture, mining and manufacturing), the utilities (electricity, gas and water supply) and the construction industry. In terms of the Australian and New Zealand Standard Industrial Classification (ANZSIC) the service industries cover the wholesale and retail trade, accommodation, cafes and restaurants, transport and storage, communication services, finance and insurance, property and business services, government administration and defence, education, health and community services, cultural and recreational services and personal and other services.

## An overview

The service industries sector is the largest component of the Australian economy in terms of number of businesses, employment and gross product.

Of the estimated 923,000 private sector businesses in Australia in 1994–95, some 589,000 or 64% were in the service industries. For small businesses (those with less than 20 employees) the proportions are similar, service industries accounting for 64% of the 887,000 small businesses in Australia (table 21.1).

As table 21.2 shows, in terms of employment the service industries sector is even more dominant, accounting for 73% of employment at May 1997. Total employment in the service industries sector was 6,106,000 persons, of whom 4,245,000 were in full time employment and 1,861,000 in part time employment. The high proportion (31%) of part time employment is a feature of the service industries, being particularly evident in accommodation, cafes and restaurants and retail trade, where part time employment accounted for 47% and 45%, respectively, of total employment in those industries. In the non service industries as a whole, part time employment accounts for only 14% of employment.

**21.1 NUMBER OF BUSINESSES, 1994–95**

| Industry                                                         | Unit | Small businesses | Other businesses | Total        |
|------------------------------------------------------------------|------|------------------|------------------|--------------|
| Agriculture                                                      | '000 | 101.5            | 8.9              | 110.4        |
| Mining                                                           | '000 | 2.5              | 0.3              | 2.8          |
| Manufacturing                                                    | '000 | 67.9             | 1.5              | 69.4         |
| Electricity, gas and water supply                                | '000 | 0.1              | 0.0              | 0.1          |
| Construction                                                     | '000 | 149.7            | 1.8              | 151.5        |
| <b>Service Industries</b>                                        |      |                  |                  |              |
| Wholesale trade                                                  | '000 | 50.0             | 3.9              | 53.9         |
| Retail trade                                                     | '000 | 134.7            | 4.0              | 138.7        |
| Accommodation, cafes and restaurants                             | '000 | 25.4             | 3.1              | 28.5         |
| Transport and storage                                            | '000 | 44.1             | 1.4              | 45.5         |
| Communication services                                           | '000 | 8.0              | 0.0              | 8.0          |
| Finance and insurance                                            | '000 | 20.7             | 1.1              | 21.8         |
| Property and business services                                   | '000 | 131.4            | 3.9              | 135.3        |
| Education                                                        | '000 | 15.6             | 1.1              | 16.7         |
| Health and community services                                    | '000 | 53.5             | 2.8              | 56.3         |
| Cultural and recreational services                               | '000 | 27.2             | 1.0              | 28.2         |
| Personal and other services                                      | '000 | 55.0             | 0.9              | 55.9         |
| <i>Total</i>                                                     | '000 | 565.6            | 23.0             | 588.6        |
| <b>Total all industries</b>                                      | '000 | <b>887.3</b>     | <b>35.5</b>      | <b>922.8</b> |
| Businesses in service industries as a percentage of all business | %    | 63.7             | 64.8             | 63.8         |

Source: *Small Business in Australia, 1995* (1321.0).

Since May 1987, employment in service industries has increased 27%, full time employment increasing 17% and part time employment 60%. In contrast, over the same period employment has increased only slightly (3%) in agriculture, is marginally (1%) down in manufacturing and has declined 21% in mining.

Within the service industries the major employing industry is retail trade with 1,225,000 persons employed, representing 15% of all employment. Other large employing service industries are property and business services (837,000 persons), health and community services (772,000 persons) and wholesale trade (501,000 persons). The industry showing the greatest growth since 1987 is property and

business services, where employment has increased 69% from 495,000 persons to 837,000 persons. The other industries showing large growth are accommodation, cafes and restaurants which has increased 59% in the ten year period since May 1987, and cultural and recreational services which has increased 49% over the same period.

Industry output or gross product (at average 1989–90 prices) of the service industries sector in 1995–96 was \$249,728m and accounted for 65% of the gross product of all industries, as shown in table 21.3. Since 1985–86 there has been an increase of 41% in the gross product (at average 1989–90 prices) of the service industries sector.

## 21.2 EMPLOYED PERSONS, By Industry

|                                                      | Full time employment |                |             | Part time employment |                |             | Total employment |                |             |
|------------------------------------------------------|----------------------|----------------|-------------|----------------------|----------------|-------------|------------------|----------------|-------------|
|                                                      | 1987(a)              | 1997(a)        | increase    | 1987(a)              | 1997(a)        | increase    | 1987(a)          | 1997(a)        | increase    |
|                                                      | '000 persons         | '000 persons   | %           | '000 persons         | '000 persons   | %           | '000 persons     | '000 persons   | %           |
| Agriculture                                          | 327.3                | 334.3          | 2.1         | 89.4                 | 93.7           | 4.8         | 416.8            | 428.0          | 2.7         |
| Mining                                               | 100.6                | 79.7           | -20.8       | 2.8                  | 2.7            | -3.6        | 103.5            | 82.3           | -20.5       |
| Manufacturing                                        | 1 051.4              | 1 012.5        | -3.7        | 85.4                 | 115.6          | 35.4        | 1 136.8          | 1 128.1        | -0.8        |
| Electricity, gas and water                           | 125.3                | 66.8           | -46.7       | 1.4                  | 1.5            | 7.1         | 126.8            | 68.3           | -46.1       |
| Construction                                         | 451.5                | 497.1          | 10.1        | 60.9                 | 79.3           | 30.2        | 512.5            | 576.4          | 12.5        |
| Service industries                                   |                      |                |             |                      |                |             |                  |                |             |
| Wholesale trade                                      | 387.7                | 431.1          | 11.2        | 48.9                 | 69.5           | 42.1        | 436.7            | 500.6          | 14.6        |
| Retail trade                                         | 632.7                | 673.5          | 6.4         | 333.0                | 551.7          | 65.7        | 965.6            | 1 225.2        | 26.9        |
| Accommodation, cafes and restaurants                 | 142.0                | 216.0          | 52.1        | 116.6                | 195.3          | 67.5        | 258.7            | 411.3          | 59.0        |
| Transport and storage                                | 336.8                | 345.5          | 2.6         | 36.5                 | 49.6           | 35.9        | 373.4            | 395.1          | 5.8         |
| Communication services                               | 135.9                | 141.3          | 4.0         | 11.3                 | 19.6           | 73.5        | 147.1            | 160.9          | 9.4         |
| Finance and insurance                                | 280.5                | 259.5          | -7.5        | 34.4                 | 56.9           | 65.4        | 314.9            | 316.4          | 0.5         |
| Property and business services                       | 396.0                | 631.7          | 59.5        | 99.3                 | 205.5          | 106.9       | 495.3            | 837.2          | 69.0        |
| Government administration and defence                | 315.7                | 313.0          | -0.9        | 30.5                 | 44.8           | 46.9        | 346.2            | 357.8          | 3.4         |
| Education                                            | 344.5                | 397.1          | 15.3        | 143.0                | 192.2          | 34.4        | 487.5            | 589.2          | 20.9        |
| Health and community services                        | 397.5                | 472.8          | 18.9        | 204.1                | 299.0          | 46.5        | 601.6            | 771.8          | 28.3        |
| Cultural and recreational services                   | 88.8                 | 127.4          | 43.5        | 46.1                 | 73.5           | 59.4        | 134.9            | 200.9          | 48.9        |
| Personal and other services                          | 182.0                | 236.1          | 29.7        | 63.4                 | 103.5          | 63.2        | 245.4            | 339.6          | 38.4        |
| <b>Total</b>                                         | <b>3 640.1</b>       | <b>4 245.0</b> | <b>16.6</b> | <b>1 167.1</b>       | <b>1 861.1</b> | <b>59.5</b> | <b>4 807.3</b>   | <b>6 106.0</b> | <b>27.0</b> |
| <b>Total all industries</b>                          | <b>5 696.2</b>       | <b>6 235.4</b> | <b>9.5</b>  | <b>1 407.2</b>       | <b>2 153.8</b> | <b>53.1</b> | <b>7 103.6</b>   | <b>8 389.3</b> | <b>18.1</b> |
|                                                      | %                    | %              |             | %                    | %              |             | %                | %              |             |
| Service industries as a percentage of all industries | 63.9                 | 68.1           | ..          | 82.9                 | 86.4           | ..          | 67.7             | 72.8           | ..          |

(a) At May.

Source: Labour Force, Australia (6203.0).

The goods producing sector has not performed as well; while mining and manufacturing recorded increases of 41% and 21% respectively, the gross product of the agriculture industry increased by only 16% in the period. As a result the share of the economy, as measured by gross product, accounted for service industries has increased from 62% to 65% in the period 1985–86 to 1995–96.

The largest contributor to the service industries sector was the wholesale trade industry, which had a gross product of \$43,890m, representing 18% of service industries gross product. The next largest was property and business services with a gross product of \$34,306m, 14% the total for the service industries sector.

## Statistics for selected service industries

Presented below are statistics for a selection of service industries. The information provided is sourced primarily from the rotating program of service industries collections conducted by the ABS. The exceptions are the retail and wholesale industries where information has been sourced from the monthly and quarterly sales collections respectively.

## Retail trade

The retail trade industry comprises businesses primarily engaged in the resale of new or used goods to final consumers for personal or household consumption or in selected repair activities such as repair of household equipment or motor vehicles.

Retail turnover accounts for a major share (about 40%) of expenditure-based estimates of Gross Domestic Product (GDP). Retail turnover is also an important current economic indicator and a guide to consumer confidence. Components of turnover are used to monitor changes in consumer buying patterns.

Table 21.4 presents annual estimates of turnover by retail industry group, at average 1989–90 prices. In real terms, retail turnover showed no growth in 1996–97, after growth of 3.9% and 5.6% respectively in the two previous financial years. Increases were recorded during 1996–97 by the household good retailing (5.2%), other retailing (3.5%), and food retailing (0.6%) industry groups. However, these increases were offset by falls in the other four retail industry groups.

**21.3 GROSS PRODUCT AT AVERAGE 1989–90 PRICES, By Industry**

|                                                      | 1985–86        | 1995–96        |             |
|------------------------------------------------------|----------------|----------------|-------------|
|                                                      | \$m            | \$m            | % increase  |
| Agriculture                                          | 13 736         | 15 873         | 15.6        |
| Mining                                               | 13 277         | 18 668         | 40.6        |
| Manufacturing                                        | 49 102         | 59 184         | 20.5        |
| Electricity, gas and water                           | 10 336         | 13 707         | 32.6        |
| Construction                                         | 22 797         | 27 147         | 19.1        |
| Service industries                                   |                |                |             |
| Wholesale trade                                      | 32 093         | 43 890         | 36.8        |
| Retail trade                                         | 24 542         | 30 657         | 24.9        |
| Accommodation, cafes and restaurants                 | 5 698          | 8 240          | 44.6        |
| Transport and storage                                | 16 622         | 25 462         | 53.2        |
| Communication services                               | 6 025          | 15 180         | 152.0       |
| Finance and insurance                                | 15 461         | 17 572         | 13.7        |
| Property and business services                       | 22 710         | 34 306         | 51.1        |
| Government administration and defence                | 11 705         | 15 393         | 31.5        |
| Education                                            | 13 999         | 19 509         | 39.4        |
| Health and community services                        | 15 837         | 23 303         | 47.1        |
| Cultural and recreational services                   | 6 657          | 8 683          | 30.4        |
| Personal and other services                          | 5 215          | 7 533          | 44.4        |
| Total                                                | 176 564        | 249 728        | 41.4        |
| <b>Total all industries(a)</b>                       | <b>285 812</b> | <b>384 307</b> | <b>34.5</b> |
|                                                      | %              | %              |             |
| Service industries as a percentage of all industries | 61.8           | 65.0           | ..          |

(a) Excludes ownership of dwellings, import duties and imputed bank service charge.

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0).

## 21.4 RETAIL TURNOVER AT AVERAGE 1989-90 PRICES, By Industry

|         | Food<br>retailing | Department<br>stores | Clothing<br>and<br>softgood<br>retailing | Household<br>good retailing | Recreational<br>good retailing | Other<br>retailing | Hospitality<br>and selected<br>other services | Total   |
|---------|-------------------|----------------------|------------------------------------------|-----------------------------|--------------------------------|--------------------|-----------------------------------------------|---------|
| Year    | \$m               | \$m                  | \$m                                      | \$m                         | \$m                            | \$m                | \$m                                           | \$m     |
| 1986-87 | 31 724            | 9 778                | 7 483                                    | 10 033                      | 4 597                          | 6 250              | 15 378                                        | 85 243  |
| 1987-88 | 32 488            | 9 798                | 7 626                                    | 10 708                      | 4 567                          | 6 535              | 15 703                                        | 87 425  |
| 1988-89 | 32 670            | 9 771                | 7 809                                    | 11 231                      | 4 718                          | 7 324              | 15 993                                        | 89 515  |
| 1989-90 | 33 861            | 9 826                | 7 560                                    | 11 485                      | 5 068                          | 7 891              | 16 619                                        | 92 309  |
| 1990-91 | 34 617            | 9 461                | 7 513                                    | 11 085                      | 4 867                          | 7 986              | 16 291                                        | 91 819  |
| 1991-92 | 36 113            | 9 796                | 7 851                                    | 11 447                      | 4 975                          | 8 423              | 15 721                                        | 94 326  |
| 1992-93 | 36 409            | 9 945                | 7 610                                    | 12 203                      | 4 845                          | 8 546              | 15 375                                        | 94 933  |
| 1993-94 | 36 867            | 10 023               | 7 666                                    | 13 099                      | 5 100                          | 9 323              | 16 137                                        | 98 215  |
| 1994-95 | 38 811            | 10 330               | 7 873                                    | 13 832                      | 5 479                          | 9 870              | 17 543                                        | 103 739 |
| 1995-96 | 40 647            | 10 604               | 8 003                                    | 14 417                      | 5 879                          | 10 300             | 17 894                                        | 107 744 |
| 1996-97 | 40 902            | 10 529               | 7 864                                    | 15 169                      | 5 687                          | 10 662             | 16 981                                        | 107 794 |

Source: Retail Trade, Australia (8501.0)

The food retailing industry group constitutes the largest component of retail trade, accounting for 37.2% of total retail turnover in 1986-87, and 37.9% in 1996-97. The 29% growth in the food retailing industry over the past decade has closely mirrored overall growth in retailing of 27%. The household goods industry has been one of the strongest growing industries over the decade (51% growth), reflecting the strong growth in sales of electrical goods and home computers. The slowest growth over this period was in clothing and soft goods retailing industry (5% growth) and department stores (8% growth). The share of total retailing by department stores has fallen from 11.5% in 1986-87 to 9.8% in 1996-97.

Recreational goods and hospitality are two notable areas of discretionary expenditure by consumers. Turnover in the recreational goods retailing, and the hospitality and selected other services industries showed strong growth over the period 1993-94 to 1995-96, but fell in 1996-97.

## Wholesale trade

The wholesale trade industry covers those businesses involved in the resale of new or used goods to businesses or to institutional (including government) users.

As with the retail trade industry, the wholesale trade industry is a significant component of the Australian economy and provides a key indicator of economic activity. Table 21.5 presents annual estimates of wholesale sales (at average 1989-90 prices) since 1989-90. The table shows that in 1996-97 wholesale sales recorded a small increase of 1.1% on 1995-96 sales. This followed

increases of 2.0% in 1995-96 and 14.3% in 1994-95. During the downturn in the economy in 1990-91 and 1991-92, wholesale sales declined by 5.3% in both years, and sales did not exceed those recorded in 1989-90 until 1994-95.

## 21.5 WHOLESALE SALES AT AVERAGE 1989-90 PRICES

|         | \$m     | % increase |
|---------|---------|------------|
| 1989-90 | 139 100 | ..         |
| 1990-91 | 131 744 | -5.3       |
| 1991-92 | 124 784 | -5.3       |
| 1992-93 | 125 839 | 0.8        |
| 1993-94 | 134 995 | 7.3        |
| 1994-95 | 154 241 | 14.3       |
| 1995-96 | 157 300 | 2.0        |
| 1996-97 | 159 104 | 1.1        |

Source: Stocks and Sales, Selected Industries, Australia (5629.0).

## Accommodation

The accommodation industry, an important part of the tourism and hospitality sector, consists of hotels, motels and similar units mainly engaged in providing short term accommodation.

At 30 June 1996 there were 5,288 businesses in the accommodation industry. This represented a 23% increase over the number of businesses in the industry at June 1992. These businesses employed a total of 81,086 persons at 30 June 1996, an increase of 9% since 1992. The rise in employment was most marked in full time employment, which increased 14% in the period whereas part time employment increased by only 3%.

As table 21.6 shows, the total income of the industry in 1995–96 was \$5,259m, with takings from accommodation representing the majority (62%) of this total. This contrasts with 1991–92 when takings from accommodation accounted for 59% of total income. The significant increase in takings from accommodation resulted in an operating profit before tax for the industry of \$401m, which equated to an operating profit margin of 7.8%, compared with an 8.4% loss in 1991–92.

### Clubs, pubs, taverns and bars

As with the accommodation industry, the clubs, pubs, taverns and bars industries are important parts of the tourism and hospitality sector. The clubs industry covers businesses which mainly provide hospitality services to members on the premises, while pubs, taverns and bars cover businesses which mainly sell alcoholic beverages for consumption on the premises. In 1994–95 there were 7,609 businesses in these two industries combined (table 21.7).

Employment in the clubs, pubs, taverns and bars industries was 133,973 at the end of

June 1995 (table 21.7). This was almost unchanged from employment in the industries at June 1992.

Total income of the two industries in 1994–95 was \$11,177m, an increase of 15% on 1991–92. While sales of meals and alcohol increased only slightly (1.3%) in the period, takings from gambling increased by 81% and in 1994–95 accounted for 26% of total income. For the clubs industry, takings from gambling now represent the major source of income, with 50% of income being generated from this source. Similarly in the pubs, taverns and bars industry the takings from gambling have grown markedly as a source of income, from 3% of total income in 1991–92 to 9% in 1994–95.

After deduction of expenses the industries recorded an operating profit before tax of \$687m in 1994–95. This represented an operating profit margin of 6.2%, with clubs recording 9.2% and pubs, taverns and bars recording 4.1%. These compare with 1991–92 operating profit margins of 2.9%, 4.8% and 1.7% respectively.

21.6 ACCOMMODATION INDUSTRY

|                             | 1991–92 | 1995–96 | Increase |
|-----------------------------|---------|---------|----------|
|                             | no.     | no.     | %        |
| Businesses                  | 4 314   | 5 288   | 22.6     |
|                             | persons | persons | persons  |
| Employment                  |         |         |          |
| Full time                   | 43 766  | 49 852  | 13.9     |
| Part time                   | 30 370  | 31 234  | 2.8      |
| Total                       | 74 136  | 81 086  | 9.4      |
|                             | \$m     | \$m     | %        |
| Income                      |         |         |          |
| Takings from accommodation  | 2 336.5 | 3 252.8 | 39.2     |
| Other income                | 1 645.2 | 2 006.4 | 22.0     |
| Total income                | 3 981.7 | 5 259.2 | 32.1     |
| Operating profit before tax | –319.2  | 400.8   | . .      |
|                             | %       | %       |          |
| Operating profit margin     | –8.4    | 7.8     | . .      |

Source: Accommodation Industry, Australia 1995–96 (8695.0).

## 21.7 CLUBS, PUBS, TAVERNS AND BARS INDUSTRIES

|                                                | 1991-92            | 1994-95            | Increase   |
|------------------------------------------------|--------------------|--------------------|------------|
| CLUBS (HOSPITALITY)                            |                    |                    |            |
| Businesses                                     | no.<br>3 811       | no.<br>3 284       | %<br>-13.8 |
| Employment                                     | persons<br>60 424  | persons<br>62 536  | %<br>3.5   |
| Income                                         | \$m                | \$m                | %          |
| Sales of meals and alcohol                     | 1 710.2            | 1 729.8            | 1.1        |
| Takings from gambling                          | 1 441.9            | 2 355.3            | 63.3       |
| Total income                                   | 3 810.5            | 4 729.4            | 24.1       |
| Operating profit before tax                    | 178.2              | 429.1              | 140.8      |
| Operating profit margin                        | %<br>4.8           | %<br>9.2           | ..         |
| PUBS, TAVERNS AND BARS                         |                    |                    |            |
| Businesses                                     | no.<br>4 347       | no.<br>4 325       | %<br>-0.5  |
| Employment                                     | persons<br>73 526  | persons<br>71 437  | %<br>-2.8  |
| Income                                         | \$m                | \$m                | %          |
| Sales of meals and alcohol                     | 5 209.6            | 5 278.2            | 1.3        |
| Takings from gambling                          | 181.8              | 576.1              | 216.9      |
| Total income                                   | 5,911.6            | 6,390.1            | 8.1        |
| Operating profit before tax                    | 97.9               | 258.2              | 163.7      |
| Operating profit margin                        | %<br>1.7           | %<br>4.1           | ..         |
| CLUBS (HOSPITALITY) AND PUBS, TAVERNS AND BARS |                    |                    |            |
| Businesses                                     | no.<br>8 158       | no.<br>7 609       | %<br>-6.7  |
| Employment                                     | persons<br>133 950 | persons<br>133 973 | %<br>0.0   |
| Income                                         | \$m                | \$m                | %          |
| Sales of meals and alcohol                     | 6 919.8            | 7 008.0            | 1.3        |
| Takings from gambling                          | 1 623.7            | 2 931.4            | 80.5       |
| Total income                                   | 9 722.1            | 11 119.5           | 14.4       |
| Operating profit before tax                    | 276.1              | 687.3              | 148.9      |
| Operating profit margin                        | %<br>2.9           | %<br>6.2           | ..         |

Source: Clubs, Pubs, Taverns and Bars, Australia, 1994-95 (8687.0).

### Gambling services

The ABS conducted its first survey of the gambling services industries in respect of 1994-95. The industries include businesses mainly engaged in lotteries and lotto operations, casino operations and other gambling services

such as totalisator and bookmaker operations. However, the industries do not include the gambling services provided by clubs, pubs, taverns and bars, which accounted for about 35% of net takings from gambling in 1994-95.

As table 21.8 shows, the 2,041 businesses in the gambling services industries in 1994–95 had employment of 32,062 persons at the end of June 1995, almost equally split between full time and part time. Total income of the industry was \$15,511m, primarily takings from gambling, which resulted in an operating profit before tax of \$1,291m, after expenses of \$14,225m including \$9,978m in payouts and prizes and \$1,695m in gambling taxes, levies and other gambling related payments to government bodies. This profit represented an operating profit margin of 8.4%. The lotteries industry recorded the highest operating profit margin with a return of 19.4%, while casinos recorded a return of 6.5%.

### Real estate agents

The real estate agents industry covers businesses mainly engaged in valuing, purchasing, selling (by auction or private treaty), managing or renting real estate on behalf of other people. The most recent survey of the industry was in respect of 1995–96.

There were 8,082 businesses in the real estate agents industry at 30 June 1996 (table 21.9). This represented an increase of 11% in the three year period since June 1993. There were 45,956 persons employed in the industry at 30 June 1996. Full time employment accounted for 85% while the remainder worked part time. Employment in the industry at 30 June 1996 represented a 12% increase since June 1993, with full time employment increasing 13% while part time employment increased by only 7%.

There were a further 9,830 persons working in the industry at 30 June 1996 on a commission only basis. The number of staff working on this basis has declined 11% since June 1993, when there were 10,978 persons working on commission only.

Total income of the industry in 1995–96 was \$3,370m, an increase of 19% since 1992–93. After expenses the industry had an operating profit before tax of \$275m. This represented an operating profit margin of 8.3%, which was slightly higher than the operating profit margin (7.7%) recorded in 1992–93.

**21.8 GAMBLING SERVICES INDUSTRIES, 1994–95**

|                             | Unit    | Lotteries | Casinos | Gambling services<br>n.e.c. | Total    |
|-----------------------------|---------|-----------|---------|-----------------------------|----------|
| Businesses at 30 June 1995  | no.     | 178       | 14      | 1 849                       | 2 041    |
| Employment at 30 June 1995  |         |           |         |                             |          |
| Full time                   | persons | 1 313     | 11 005  | 3 369                       | 15 687   |
| Part time                   | persons | 693       | 4 832   | 10 850                      | 16 375   |
| Total                       | persons | 2 006     | 15 837  | 14 219                      | 32 062   |
| Income                      |         |           |         |                             |          |
| Gambling takings(a)         | \$m     | 3 977.4   | 1 381.8 | 9 541.9                     | 14 901.1 |
| Other income                | \$m     | 157.0     | 268.7   | 184.4                       | 610.0    |
| Total income                | \$m     | 4 134.4   | 1 650.5 | 9 726.3                     | 15 511.1 |
| Expenses                    |         |           |         |                             |          |
| Payouts and prizes          | \$m     | 2 094.5   | .       | 7 883.0                     | 9 977.5  |
| Labour costs                | \$m     | 50.4      | 441.9   | 162.2                       | 654.5    |
| Other expenses              | \$m     | 1 198.6   | 1 103.9 | 1 290.3                     | 3 592.8  |
| Total expenses              | \$m     | 3 343.5   | 1 545.8 | 9 335.5                     | 14 224.8 |
| Operating profit before tax | \$m     | 793.2     | 107.4   | 390.6                       | 1 291.2  |
| Operating profit margin     | %       | 19.4      | 6.5     | 4.0                         | 8.4      |

(a) Gambling takings for casinos are on a net basis and hence there are no data for payouts and prizes.

Source: *Gambling Industries, Australia, 1994–95* (8684.0).



**21.9 REAL ESTATE AGENTS INDUSTRY**

|                                    | 1992-93 | 1995-96 | Increase |
|------------------------------------|---------|---------|----------|
|                                    | no.     | no.     | %        |
| Businesses                         | 7 265   | 8 082   | 11.2     |
|                                    | persons | persons | %        |
| Employment                         |         |         |          |
| Full time                          | 34 340  | 38 898  | 13.3     |
| Part time                          | 6 604   | 7 057   | 6.9      |
| Total                              | 40 945  | 45 956  | 12.2     |
| Staff working solely on commission | 10 978  | 9 830   | -10.5    |
|                                    | \$m     | \$m     | %        |
| Total income                       | 2 842.8 | 3 369.6 | 18.5     |
| Operating profit before tax        | 216.0   | 275.4   | 27.5     |
|                                    | %       | %       |          |
| Operating profit margin            | 7.7     | 8.3     | ..       |

Source: Real Estate Agents Industry, Australia, 1995-96 (8663.0).

**Legal and accounting services**

As shown in table 21.10, there were 18,185 businesses in the legal and accounting services industries at 30 June 1996, an increase of 4% since June 1993. Within the legal profession there were 9,796 practices, an overall increase of 11% since June 1993, with solicitor practices increasing 15% and barrister practices increasing only 5%. Within the accounting profession there were 8,369 businesses, a decline of 4% since June 1993.

The legal and accounting services industries employed a total of 134,286 persons at 30 June 1996, an increase of 9% since June 1993. For both professions the most significant increase in employment since 1993 occurred in qualified employees, this category increasing by 28% and 22% in legal and accounting services respectively. In contrast the increase in support staff (i.e. other employees) was small, 3% in legal services and 6% in accounting services. As a result the number of support staff per principal or qualified employee has fallen in both industries, e.g. in the legal services industry there has been a reduction from 1.6 support staff for each principal or practitioner in 1993 to a ratio of 1.4 in 1996.

**21.10 LEGAL AND ACCOUNTING SERVICES INDUSTRIES**

|                                      | 1992-93 | 1995-96  | Increase |
|--------------------------------------|---------|----------|----------|
|                                      | no.     | no.      | %        |
| <b>LEGAL SERVICES</b>                |         |          |          |
|                                      | no.     | no.      | %        |
| Businesses                           |         |          |          |
| Solicitors                           | 5 579   | 6 403    | 14.8     |
| Barristers                           | 3 184   | 3 350    | 5.2      |
| Other                                | 87      | 43       | -50.6    |
| Total                                | 8 850   | 9 796    | 10.7     |
|                                      | persons | persons  | %        |
| Employment                           |         |          |          |
| Principals                           | 15 606  | 16 417   | 5.2      |
| Qualified employees                  | 9 059   | 11 554   | 27.5     |
| Other employees                      | 38 442  | 39 523   | 2.8      |
| Total                                | 63 108  | 67 494   | 6.9      |
|                                      | \$m     | \$m      | %        |
| Total income                         | 5 144.0 | 5 590.9  | 8.7      |
| Operating profit before tax          | 1 655.5 | 1 750.4  | 5.7      |
|                                      | %       | %        |          |
| Operating profit margin              | 32.6    | 31.5     | ..       |
| <b>ACCOUNTING SERVICES</b>           |         |          |          |
|                                      | no.     | no.      | %        |
| Businesses                           | 8 699   | 8 389    | -3.6     |
|                                      | persons | persons  | %        |
| Employment                           |         |          |          |
| Principals                           | 14 143  | 15 409   | 9.0      |
| Qualified employees                  | 18 277  | 22 207   | 21.5     |
| Other employees                      | 27 580  | 29 175   | 5.8      |
| Total                                | 60 000  | 66 792   | 11.3     |
|                                      | \$m     | \$m      | %        |
| Total income                         | 4 086.4 | 4 939.1  | 20.9     |
| Operating profit before tax          | 828.6   | 954.6    | 15.2     |
|                                      | %       | %        |          |
| Operating profit margin              | 20.5    | 19.4     | ..       |
| <b>ACCOUNTING AND LEGAL SERVICES</b> |         |          |          |
|                                      | no.     | no.      | %        |
| Businesses                           | 17 549  | 18 185   | 3.6      |
|                                      | persons | persons  | %        |
| Employment                           | 123 108 | 134 286  | 9.1      |
|                                      | \$m     | \$m      | %        |
| Total income                         | 9 230.4 | 10 530.0 | 14.1     |
| Operating profit before tax          | 2 484.1 | 2 705.0  | 8.9      |
|                                      | %       | %        |          |
| Operating profit margin              | 26.9    | 25.7     | ..       |

Source: Legal and Accounting Services, Australia 1995-96 (8678.0).



The legal and accounting services industries generated total income of \$10,530m in 1995–96, the legal services industry being the main contributor with total income of \$5,591m. The combined industries had an operating profit before tax of \$2,705m. Again the legal services industry was the major contributor with \$1,750m, compared to \$955m operating profit before tax by the accounting services industry.

Both industries recorded a decline in operating profit margin. The legal services industry had an operating profit margin in 1995–96 of 31.5% compared to 32.6% recorded in 1992–93, while the accounting services industry recorded a decline from 20.5% in 1992–93 to 19.4% in 1995–96.

### Consultant engineering services

The ABS conducted a survey of the consultant engineering services industry for 1995–96, to update the results of a survey in respect of 1992–93. There were 5,514 businesses in the industry at 30 June 1996 (table 21.11). This represented an increase of only 1% in the three year period since June 1993.

The services industry employed a total of 30,736 persons at 30 June 1996. Full time employment accounted for 83% (25,384 persons) while the remainder worked part time. Employment in the industry at 30 June 1996 represented a 9% increase since June 1993. In addition to 30,736 employed persons, a further 8,212 persons were working on a contract or agency basis in the industry at 30 June 1996. The number of staff working on this basis more than doubled since June 1993, when there were 3,954 contract and agency staff. Overall 38,948 persons were working in the industry at 30 June 1996, an increase of 21% since June 1993.

The 5,514 businesses operating at 30 June 1996 generated total income of \$3,233m and had expenses of \$2,736m. The main items of expense were labour costs and payments to contractors and agency staff, which together accounted for 64% of all expenses in 1995–96.

The consultant engineering services industry recorded an operating profit before tax of \$351m for the 1995–96 financial year, which represented an operating profit margin of 11.0%. This was a significant increase on the profit margin (6.7%) recorded in 1992–93.

#### 21.11 CONSULTANT ENGINEERING SERVICES INDUSTRY

|                                       | 1992–93 | 1995–96 | Increase |
|---------------------------------------|---------|---------|----------|
|                                       | no.     | no.     | %        |
| Businesses                            | 5 454   | 5 514   | 1.1      |
|                                       | persons | persons | %        |
| Employment                            |         |         |          |
| Full time                             | 23 244  | 25 384  | 9.2      |
| Part time                             | 4 964   | 5 352   | 7.8      |
| Total                                 | 28 208  | 30 736  | 9.0      |
| Contract and agency staff             | 3 954   | 8 212   | 107.7    |
|                                       | \$m     | \$m     | %        |
| Total income                          | 2 357.7 | 3 233.3 | 37.1     |
| Expenses                              |         |         |          |
| Labour costs                          | 971.1   | 1 241.6 | 27.9     |
| Payments to contract and agency staff | 448.7   | 498.6   | 11.1     |
| Other expenses                        | 782.1   | 995.9   | 27.3     |
| Total                                 | 2 201.9 | 2 736.2 | 24.3     |
| Operating profit before tax           | 155.7   | 351.0   | 125.4    |
|                                       | %       | %       |          |
| Operating profit margin               | 6.7     | 11.0    | . .      |

Source: *Consultant Engineering Services, Australia 1995–96* (8693.0).

### Computing services

The computing services industry consists of businesses involved in providing services in data processing, information storage and retrieval, computer maintenance and computer consultancy. The ABS conducted a survey of the computing services industry for 1995–96, the first survey of the industry since 1992–93. In the intervening three years the industry has undergone very significant growth, as shown in table 21.12.

In the three years since 1993 the number of businesses in the industry nearly doubled, from 4,894 businesses at 30 June 1993 to 9,679 at 30 June 1996. Similarly, employment in the industry increased significantly (by 83%) since June 1993, with employment at 30 June 1996 of 55,046 persons.

Total income of the industry in the financial year 1995–96 was \$8,088m, an increase of 97% on that recorded in 1992–93. The major component was income from computing services, which accounted for 78% of all income. Income from hardware sales accounted for 13% of total

income. The relative contributions by income component recorded for 1995–96 were similar to those recorded for 1992–93.

## 21.12 COMPUTING SERVICES INDUSTRY

|                                    | 1992–93 | 1995–96 | Increase |
|------------------------------------|---------|---------|----------|
|                                    | no.     | no.     | %        |
| Businesses                         | 4 894   | 9 679   | 97.8     |
|                                    | persons | persons | %        |
| Employment                         |         |         |          |
| Full time                          | 26 017  | 48 123  | 85.0     |
| Part time                          | 4 039   | 6 922   | 71.4     |
| Total                              | 30 056  | 55 046  | 83.1     |
|                                    | \$m     | \$m     | %        |
| Income                             |         |         |          |
| Income from computing services     | 3 175.8 | 6 324.0 | 99.1     |
| Income from communication services | 95.5    | 147.9   | 54.9     |
| Income from hardware sales         | 505.0   | 1 047.8 | 107.5    |
| Other income                       | 323.9   | 568.6   | 75.5     |
| Total income                       | 4 100.2 | 8 088.3 | 97.3     |
| Operating profit before tax        | 364.9   | 455.1   | 24.7     |
|                                    | %       | %       |          |
| Operating profit margin            | 9.3     | 5.7     | ..       |

Source: *Computing Services Industry, Australia, 1995–96* (8669.0).

In spite of the large growth in total income, the operating profit before tax of the industry for 1995–96, at \$455m, was only 25% higher than that recorded for 1992–93. This small growth in operating profit before tax, relative to the large growth in income, resulted in a significant decline in the industry operating profit margin, from 9.3% in 1992–93 to 5.7% in 1995–96.

## Private medical practice

The ABS conducted its first survey of the private medical practice industry in respect of 1994–95. At 30 June 1995 there were 22,298 businesses in the industry, with slightly more general practice medical businesses than specialist medical businesses. The businesses had employment of 106,134 persons, including 33,987 medical practitioners, at 30 June 1995 (table 21.13).

The private medical practice industry generated gross income of \$7,241m in 1994–95, specialist medical businesses accounting for 61% (\$4,405m) of the total. Expenses for the industry totalled \$5,391m, of which wages and salaries paid (\$2,649m) was the largest component (49%). Wages and salaries paid to medical practitioners totalled \$1,367m.

After allowance for expenses, the operating profit before tax of medical practice businesses was \$1,850m, specialist medical businesses again accounting for the bigger share (58%). The operating profit margin of the industry was 25.8%.

## 21.13 PRIVATE MEDICAL PRACTICE INDUSTRY, 1994–95

|                             | Unit    | General practice medical businesses | Specialist medical businesses | Total   |
|-----------------------------|---------|-------------------------------------|-------------------------------|---------|
| Businesses                  | no.     | 11 933                              | 10 364                        | 22 298  |
| Employment                  |         |                                     |                               |         |
| Medical practitioners       | persons | 20 825                              | 13 161                        | 33 987  |
| Other                       | persons | 33 831                              | 38 316                        | 72 147  |
| Total                       | persons | 54 657                              | 51 477                        | 106 134 |
| Gross income                | \$m     | 2 836.3                             | 4 404.6                       | 7 240.9 |
| Expenses                    |         |                                     |                               |         |
| Wages and salaries          |         |                                     |                               |         |
| Medical practitioners       | \$m     | 611.3                               | 755.9                         | 1 367.2 |
| Other                       | \$m     | 502.6                               | 779.5                         | 1 282.2 |
| Total wages and salaries    | \$m     | 1 113.9                             | 1 535.5                       | 2 649.4 |
| Other expenses              | \$m     | 944.2                               | 1 797.0                       | 2 741.2 |
| Total expenses              | \$m     | 2 058.1                             | 3 332.5                       | 5 390.6 |
| Operating profit before tax | \$m     | 778.2                               | 1 072.1                       | 1 850.3 |
| Operating profit margin     | %       | 27.6                                | 24.6                          | 25.8    |

Source: *Private Medical Practice Industry, Australia, 1994–95* (8685.0).

## Community services

The ABS conducted its first comprehensive survey of the community services industry for 1995–96. The survey covered businesses mainly involved in the provision of child care services, accommodation for the aged, other residential care services, non residential care services and nursing homes.

At 30 June 1996 there were 7,300 businesses in the community services industry. Of these, 69% were 'not for profit' organisations (ie businesses whose status does not permit them to be a source of income, profit or financial gain for the entities which establish, control or finance them). The 2,228 'for profit' organisations were mainly concentrated in the child care industry (61%) and nursing homes (25%).

Overall, the industry employed 257,049 persons at 30 June 1996. The majority (69%) of these were employed on a part time basis. The

proportion of persons employed on a part time basis varied from industry to industry, with the nursing homes industry having the highest incidence (79%) of part time employees.

In addition to 257,049 persons employed, a further 255,426 persons were working in the industry as volunteers. The non residential services industry was the greatest user of volunteers, with 190,358 persons providing volunteer services to businesses in the industry at 30 June 1996.

The community services industry generated \$7,460m in income in 1995–96. Government funding was the source of \$3,977m (53%) while sales of goods and services accounted for 32% (\$2,395m) of income. The role of government funding was particularly significant in the nursing homes industry, accounting for 60% of total income. Total expenses of the community services industry were \$7,098m, labour costs representing the largest proportion (65%).

### 21.14 COMMUNITY SERVICES INDUSTRY, 1995–96

|                              | Unit    | Child care services | Accommodation for the aged | Residential care services n.e.c. | Non-residential care services n.e.c. | Nursing homes | Total   |
|------------------------------|---------|---------------------|----------------------------|----------------------------------|--------------------------------------|---------------|---------|
| <b>Businesses</b>            |         |                     |                            |                                  |                                      |               |         |
| For profit organisations     | no.     | 1 349               | 170                        | 79                               | 83                                   | 547           | 2 228   |
| Not for profit organisations | no.     | 1 517               | 543                        | 535                              | 2 156                                | 321           | 5 072   |
| Total                        | no.     | 2 866               | 713                        | 614                              | 2 239                                | 868           | 7 300   |
| <b>Employment</b>            |         |                     |                            |                                  |                                      |               |         |
| Full time                    | persons | 15 436              | 10 009                     | 8 475                            | 24 437                               | 22 185        | 80 542  |
| Part time                    | persons | 20 898              | 24 521                     | 11 126                           | 38 074                               | 81 889        | 176 507 |
| Total                        | persons | 36 334              | 34 530                     | 19 601                           | 62 510                               | 104 074       | 257 049 |
| Volunteers                   | persons | 19 665              | 15 121                     | 13 756                           | 190 358                              | 16 527        | 255 426 |
| <b>Income</b>                |         |                     |                            |                                  |                                      |               |         |
| Government funding           | \$m     | 448.2               | 478.1                      | 337.1                            | 922.1                                | 1 791.2       | 3 976.7 |
| Sales of goods and services  | \$m     | 359.6               | 461.4                      | 102.5                            | 444.8                                | 1 026.8       | 2 395.2 |
| Other income                 | \$m     | 20.4                | 152.2                      | 92.9                             | 647.2                                | 175.1         | 1 087.8 |
| Total                        | \$m     | 828.2               | 1 091.7                    | 532.5                            | 2 014.1                              | 2 993.1       | 7 459.7 |
| <b>Expenses</b>              |         |                     |                            |                                  |                                      |               |         |
| Labour costs                 | \$m     | 533.0               | 634.5                      | 398.1                            | 964.7                                | 2 093.8       | 4 624.0 |
| Other expenses               | \$m     | 253.7               | 377.5                      | 169.3                            | 921.3                                | 752.0         | 2 473.9 |
| Total                        | \$m     | 786.7               | 1 012.1                    | 567.4                            | 1 885.9                              | 2 845.8       | 7 097.9 |

Source: Community Services, Australia, Preliminary, 1995–96 (8694.0).

**Sports industries**

The sports industries cover businesses involved in horse and dog racing, operations of sports grounds and facilities, other sports and services to sports. These industries were surveyed by the ABS for the first time in respect of 1994–95.

There were 5,066 businesses in the sports industries in 1994–95. These businesses had a total employment of 58,414 persons at

30 June 1995 (table 21.15). There were a further 112,877 volunteers in these industries at 30 June 1995.

The sports industries generated \$2,517m in income during 1994–95 and had an operating profit before tax of \$169.7m. This represented an operating profit margin of 7.3%. A factor affecting the operating profit margin is the existence of many ‘not for profit’ organisations in the industry.

**21.15    SPORTS INDUSTRIES, 1994–95**

|                             | Unit    | Horse and dog<br>racing | Sports ground<br>and facilities<br>n.e.c. | Sports and<br>services to sports<br>n.e.c. | Total   |
|-----------------------------|---------|-------------------------|-------------------------------------------|--------------------------------------------|---------|
| Businesses at 30 June 1995  | no.     | 898                     | 1 581                                     | 2 588                                      | 5 066   |
| Employment at 30 June 1995  |         |                         |                                           |                                            |         |
| Full time                   | persons | 4 869                   | 7 208                                     | 6 879                                      | 18 956  |
| Part time                   | persons | 9 249                   | 14 355                                    | 15 854                                     | 39 458  |
| Total                       | persons | 14 118                  | 21 563                                    | 22 732                                     | 58 414  |
| Volunteers                  | persons | 258                     | 11 865                                    | 100 754                                    | 112 877 |
| Total Income                | \$m     | 789.1                   | 796.3                                     | 931.6                                      | 2 517.0 |
| Operating profit before tax | \$m     | 50.6                    | 49.0                                      | 70.1                                       | 169.7   |
| Operating profit margin     | %       | 6.6                     | 6.5                                       | 8.7                                        | 7.3     |

Source: *Sports Industries, Australia, 1994–95* (8686.0).

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## Introduction

**T**ourism encompasses most short-term travel away from the normal place of work and residence, including travel undertaken for business and pleasure.

It is defined by the World Tourism Organisation (WTO) as: “the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes”.

This identifies ‘tourism’ as being more than just leisure travel. It also encompasses travel for business, health, education, religious and other reasons.

Tourism comprises both domestic and international travel. Its economic effects are both to generate economic activity and to transfer such activity between different parts of the country. As it involves the consumption or purchase by tourists — or ‘visitors’ in the WTO terminology — of any good or service, its economic impact ranges over many sectors of the economy. The impact of tourism is most directly felt by sectors such as transport and tour operators, accommodation establishments, theme parks and attractions, entertainment and arts venues, museums and historical sites, restaurants, travel agents and souvenir retailers. However, other sectors also benefit both directly and indirectly from tourism demand.

Tourism also draws on services provided by the Commonwealth Government, the State and Territory Governments and local government organisations without direct charge to tourists. These include the construction and maintenance of roads, airports, harbours, railways and national parks, tourism promotion, immigration and customs services, information services and the provision of a large number of recreational facilities.

While tourism has been an economic factor in Australia for a very long time, in recent times it has grown to the extent that it is now recognised as a major contributor to total economic activity. In particular, international tourism has experienced substantial growth in the past decade or so. This has focused the need for improved standards of facilities and service, and has contributed to a recognition that tourism covers a sophisticated set of economic activities with great potential for future domestic and export earnings.

Because of Australia’s island status far from most of its international source markets, tourism in this country will continue to be dominated by domestic tourism for the foreseeable future. Despite high annual growth rates, international tourism still only accounts for around a quarter of total tourism activity. While international tourism is forecast to continue to enjoy significantly higher growth rates than domestic tourism, it will be well into the next century before it matches the level of activity of domestic tourism.

## Economic importance

It is estimated by the Bureau of Tourism Research that expenditure by visitors directly contributed 6.6% to Gross Domestic Product in 1993–94, and accounted directly for some 536,000 jobs (6.9% of total employment).

In 1993–94, domestic tourism expenditure was an estimated \$32.5b. In addition, \$3.8b was spent domestically by Australians prior to departure on overseas visits. In 1995–96, international tourism to Australia generated export earnings of \$14.1b. This accounted for 12.8% of Australia’s total export earnings and 63.1% of services exports.

While growth in tourism flows to Australia in the mid to late 1980s was at almost twice the international growth rate in tourism flows to all countries, Australia’s share of world tourism is still small, accounting for only around 0.5% of total international visitor arrivals in all countries. Because Australia is a long-haul destination for most international visitors, this share is never likely to be large. However, starting from a low base, there is still considerable potential for growth.

The number of international visitors to Australia increased at an average of 25% per year from 1984 to 1988. However, 1989 saw a 7.5% decrease in arrivals to 2.1 million following the strong contributions of Expo 88 and the Bicentennial to the growth in 1988, but also reflecting the adverse impact of the disruption to domestic airline services caused by the airline pilots’ dispute in late 1989. Arrivals recovered by 6.5% to 2.2 million in 1990 and thereafter increased to new record levels of 2.4 million in 1991, growing by double digit rates in most years to reach 4.2 million in 1996. Visitors from Asia have contributed increasingly to this upward trend.

The domestic travel market was relatively stagnant in the late 1980s and experienced an overall small downward trend in visitor nights during the early 1990s. Because of changes in survey methods, it is not possible to compare the latest figures, for 1996, with earlier figures.

## Domestic tourism

In 1996, Australian residents, 15 years of age and over, spent a total of 252.5 million nights visiting other parts of the country (table 22.1). Each trip took an average of four nights, and each person in the population made an average of four trips during the year. Residents of the Australian Capital Territory were the most frequent

travellers (average of six trips), while residents of the Northern Territory tended to stay away for the longest period (average of eight nights).

As table 22.2 shows, 'pleasure/holiday', as the main purpose of trip, accounted for the biggest proportion of visitor nights (41%), followed by 'visiting friends/relatives' (30%). 'Business trips' accounted for 13% of all visitor nights, while 'other' reasons accounted for 16%.

New South Wales was the most popular destination, accounting for nearly a third of all visitor nights. Queensland was the next most popular destination, attracting a quarter of all visitor nights, while Victoria accounted for nearly a fifth of all visitor nights.

### 22.1 SUMMARY OF PERSON TRIPS AND NIGHTS AWAY(a), 1996

| State/Territory of origin    | Estimated population as at 30 June 1996<br>'000 | Person trips<br>'000 | Average trips<br>per person | Total nights away<br>'000 | Nights away<br>per person |
|------------------------------|-------------------------------------------------|----------------------|-----------------------------|---------------------------|---------------------------|
| New South Wales              | 4 892                                           | 20 509               | 4                           | 82 211                    | 4                         |
| Victoria                     | 3 613                                           | 16 402               | 5                           | 72 282                    | 4                         |
| Queensland                   | 2 603                                           | 11 954               | 5                           | 49 990                    | 4                         |
| South Australia              | 1 175                                           | 4 704                | 4                           | 19 453                    | 4                         |
| Western Australia            | 1 373                                           | 6 033                | 4                           | 24 441                    | 4                         |
| Tasmania                     | 369                                             | 1 496                | 4                           | 6 203                     | 4                         |
| Northern Territory           | 133                                             | 357                  | 3                           | 2 693                     | 8                         |
| Australian Capital Territory | 240                                             | 1 457                | 6                           | 5 157                     | 4                         |
| <b>Australia</b>             | <b>14 398</b>                                   | <b>62 976</b>        | <b>4</b>                    | <b>252 531</b>            | <b>4</b>                  |

(a) For persons aged 15 years and over.

Source: Domestic Tourism Monitor, Bureau of Tourism Research.

### 22.2 VISITOR NIGHTS, Main Purpose of Trip — 1996

| State/Territory              | All business<br>'000 | Pleasure/holiday<br>'000 | Visiting friends/relatives<br>'000 | Other<br>'000 | Total<br>'000  |
|------------------------------|----------------------|--------------------------|------------------------------------|---------------|----------------|
| New South Wales              | 9 507                | 33 203                   | 24 556                             | 12 507        | 79 773         |
| Victoria                     | 5 504                | 19 614                   | 14 408                             | 9 196         | 48 722         |
| Queensland                   | 7 636                | 27 105                   | 17 642                             | 9 354         | 61 737         |
| South Australia              | 2 370                | 6 459                    | 5 099                              | 3 316         | 17 244         |
| Western Australia            | 4 707                | 9 031                    | 6 471                              | 3 641         | 23 850         |
| Tasmania                     | 971                  | 3 493                    | 2 912                              | 964           | 8 340          |
| Northern Territory           | 1 229                | 1 735                    | 1 125                              | 815           | 4 904          |
| Australian Capital Territory | 1 426                | 1 242                    | 1 942                              | 1 710         | 6 320          |
| Other and not known          | 328                  | 788                      | 375                                | 150           | 1 641          |
| <b>Australia</b>             | <b>33 678</b>        | <b>102 670</b>           | <b>74 530</b>                      | <b>41 653</b> | <b>252 531</b> |

Source: Domestic Tourism Monitor, Bureau of Tourism Research.

As table 22.3 shows, in 1996 the most frequently used accommodation by domestic travellers was the house/flat of friends or relatives (42% of visitor nights), followed by hotels or motels with bathroom facilities in the guest room (19%), and caravan parks or camping grounds (14%). This pattern, to varying degrees, was reflected in most States/Territories, although a greater proportion of visitors to Tasmania, the Northern Territory and the Australian Capital Territory stayed in hotels/motels with facilities.

Intrastate visits account for the majority of total domestic tourism visitor nights (60%). It is a particularly important component of domestic tourism for Western Australia and Victoria,

where 77% and 69% respectively of domestic visitor nights are accounted for by residents of the State (table 22.4).

In terms of numbers of visitor nights, net beneficiaries from domestic tourism (i.e. where inbound interstate visitor nights are greater than outbound interstate visitor nights) are Queensland, Tasmania, the Northern Territory and the Australian Capital Territory. While Queensland is the biggest relative net beneficiary, with 1.7 times as many inbound nights as outbound nights, Victoria is the biggest relative net contributor, with almost twice as many outbound nights as inbound nights.

### 22.3 VISITOR NIGHTS, Type of Accommodation Used — 1996

|                                | NSW           | Vic.          | Qld           | SA            | WA            | Tas.         | NT           | ACT          | Other and not known | Aust.          |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|---------------------|----------------|
|                                | '000          | '000          | '000          | '000          | '000          | '000         | '000         | '000         | '000                | '000           |
| All accommodation used         | 14 639        | 7 946         | 12 613        | 2 877         | 3 818         | 1 836        | 1 274        | 1 768        | 33                  | 46 804         |
| Hotel/motel with facilities    | 1 677         | 1 046         | 1 313         | 555           | 561           | 246          | 96           | 137          | 3                   | 5 634          |
| Hotel/motel without facilities | 2 289         | 1 425         | 1 465         | 296           | 553           | 378          | 100          | 142          | 16                  | 6 664          |
| Caravan/tent/cabin/camping     | 11 961        | 7 288         | 7 094         | 2 655         | 4 001         | 899          | 1 191        | 377          | 130                 | 35 596         |
| Rented house/flat              | 5 925         | 2 975         | 6 160         | 1 249         | 1 603         | 454          | 221          | 186          | 0                   | 18 773         |
| Friends'/relatives' house/flat | 34 323        | 21 402        | 26 185        | 7 321         | 9 183         | 3 511        | 1 392        | 2 991        | 26                  | 106 334        |
| Own holiday house/flat         | 3 150         | 3 282         | 2 749         | 951           | 1 044         | 579          | 35           | 23           | 0                   | 11 813         |
| Farm                           | 1 283         | 908           | 601           | 354           | 587           | 74           | 25           | 13           | 0                   | 3 845          |
| Boat/cabin cruiser             | 347           | 201           | 642           | 267           | 167           | 82           | 21           | 0            | 20                  | 1 747          |
| Hostel                         | 1 331         | 513           | 672           | 146           | 600           | 119          | 100          | 117          | 0                   | 3 598          |
| Other/not stated               | 2 848         | 1 736         | 2 243         | 573           | 1 733         | 162          | 449          | 566          | 1 413               | 11 723         |
| <b>Total</b>                   | <b>79 773</b> | <b>48 722</b> | <b>61 737</b> | <b>17 244</b> | <b>23 850</b> | <b>8 340</b> | <b>4 904</b> | <b>6 320</b> | <b>1 641</b>        | <b>252 531</b> |

Source: Domestic Tourism Monitor, Bureau of Tourism Research.

### 22.4 VISITOR NIGHTS, By State/Territory of Origin by States/Territories Visited — 1996

|                 | State/Territory visited |               |               |               |               |              |              |              |                     | Aust.          |
|-----------------|-------------------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|---------------------|----------------|
|                 | NSW                     | Vic.          | Qld           | SA            | WA            | Tas.         | NT           | ACT          | Not known and other |                |
| State of origin | '000                    | '000          | '000          | '000          | '000          | '000         | '000         | '000         | '000                | '000           |
| NSW             | 51 677                  | 6 436         | 14 305        | 1 595         | 1 520         | 1 199        | 792          | 4 200        | 487                 | 82 211         |
| Vic.            | 10 982                  | 33 524        | 8 886         | 2 951         | 1 659         | 1 879        | 1 155        | 913          | 333                 | 62 282         |
| Qld             | 8 948                   | 2 982         | 33 520        | 946           | 941           | 821          | 922          | 618          | 292                 | 49 990         |
| SA              | 2 310                   | 2 753         | 1 930         | 10 087        | 853           | 200          | 836          | 265          | 219                 | 19 453         |
| WA              | 1 480                   | 1 206         | 1 026         | 939           | 18 415        | 600          | 486          | 168          | 221                 | 24 541         |
| Tas.            | 441                     | 781           | 977           | 126           | 200           | 3 479        | 64           | 93           | 43                  | 6 204          |
| NT              | 491                     | 418           | 560           | 459           | 113           | 47           | 539          | 29           | 37                  | 2 693          |
| ACT             | 3 444                   | 622           | 533           | 141           | 149           | 115          | 110          | 34           | 9                   | 5 157          |
| <b>Aust.</b>    | <b>79 773</b>           | <b>48 722</b> | <b>61 737</b> | <b>17 244</b> | <b>23 850</b> | <b>8 340</b> | <b>4 904</b> | <b>6 320</b> | <b>1 641</b>        | <b>252 531</b> |

Source: Domestic Tourism Monitor, Bureau of Tourism Research.

International inbound tourism

Characteristics

In 1996, the number of international visitors to Australia grew strongly, continuing the high growth experienced in most years since the mid 1980s. The total number of visitors in 1996 was 4,164,800, representing an increase of 11.8% on 1995 and continuing the double digit growth rates of recent years (table 22.5).

| 22.5 INBOUND VISITORS |           |           |
|-----------------------|-----------|-----------|
|                       | Visitors  | Change(a) |
| Year                  | no.       | %         |
| 1991                  | 2 370 400 | 7.0       |
| 1992                  | 2 603 300 | 9.8       |
| 1993                  | 2 996 200 | 15.1      |
| 1994                  | 3 361 700 | 12.2      |
| 1995                  | 3 725 800 | 10.8      |
| 1996                  | 4 164 800 | 11.8      |

(a) From previous year.  
Source: *Overseas Arrivals and Departures, Australia* (3401.0).

The range of countries which are significant sources of visitors is widening, with the result that the degree of dependence on the traditional source countries of Europe and North America is

lessening. Particularly large increases are being experienced from New Zealand and some of the rapidly developing South-East Asian countries such as Korea, which now accounts for over 5% of total visitors (table 22.6).

Japan continues to be Australia's most important market, accounting for 20% of total visitors in 1996. This was followed by New Zealand (16%), the United Kingdom (9%) and the United States (8%).

The largest category of international visitors during 1996 was those arriving for 'holiday' purposes, accounting for just over 60% of all visitor arrivals. In addition to these visitors, another 19% arrived for the purpose of 'visiting friends/relatives'. About 12% arrived for 'business' purposes or to attend a 'convention/conference'.

For most 'main purpose of trip' categories, New Zealand was the main source of visitors. The exceptions were 'holiday' visitors, where Japan provided 29% of all such visitors, and 'education' visitors, where Indonesia was the source of 12% of all such arrivals. However, 'holiday' visitors from New Zealand grew by a third in 1996.

'Holiday' visitors were the largest category of visitors from almost all source countries/regions. The exceptions were visitors from the United Kingdom for whom 'visiting friends/relatives' was the largest purpose category.

## 22.6 INBOUND VISITORS, By Country/Region of Residence and Main Purpose of Trip — 1996

| Country/region of residence     | Main purpose of trip      |              |                                   |                |             |              |                            | Visitors       | Change on 1995 |
|---------------------------------|---------------------------|--------------|-----------------------------------|----------------|-------------|--------------|----------------------------|----------------|----------------|
|                                 | Convention/<br>conference | Business     | Visiting<br>friends/<br>relatives | Holiday        | Employment  | Education    | Other<br>and not<br>stated |                |                |
|                                 | '000                      | '000         | '000                              | '000           | '000        | '000         | '000                       | '000           | %              |
| New Zealand                     | 21.8                      | 100.2        | 204.0                             | 302.1          | 6.1         | 4.3          | 33.4                       | 671.9          | 24.8           |
| Other Oceania                   | 4.7                       | 9.7          | 23.2                              | 49.6           | 0.5         | 6.5          | 20.6                       | 114.8          | 5.6            |
| Germany                         | 2.0                       | 8.5          | 18.9                              | 89.4           | 0.5         | 2.0          | 4.1                        | 125.4          | 1.0            |
| United Kingdom                  | 5.6                       | 29.8         | 167.3                             | 146.3          | 5.4         | 1.5          | 11.6                       | 367.5          | 5.6            |
| Other Europe                    | 13.7                      | 28.8         | 75.7                              | 160.5          | 3.4         | 7.2          | 16.5                       | 305.8          | 9.2            |
| Indonesia                       | 3.8                       | 9.3          | 15.7                              | 98.2           | 0.6         | 15.7         | 11.2                       | 154.5          | 14.4           |
| Malaysia                        | 3.5                       | 8.1          | 22.0                              | 86.6           | 0.3         | 9.3          | 4.6                        | 134.4          | 24.2           |
| Singapore                       | 4.2                       | 18.7         | 23.3                              | 160.6          | 0.3         | 9.6          | 6.1                        | 222.8          | 10.1           |
| Hong Kong                       | 3.4                       | 13.7         | 32.0                              | 86.2           | 0.3         | 12.0         | 5.6                        | 153.2          | 16.3           |
| Japan                           | 3.6                       | 29.7         | 13.6                              | 726.8          | 0.7         | 15.2         | 23.5                       | 813.1          | 3.9            |
| Korea                           | 4.4                       | 9.2          | 14.8                              | 176.6          | 0.1         | 12.9         | 9.9                        | 227.9          | 35.6           |
| Taiwan                          | 1.5                       | 7.6          | 8.6                               | 124.0          | 0.1         | 6.4          | 11.2                       | 159.4          | 4.9            |
| Other Asia                      | 14.2                      | 35.0         | 43.5                              | 97.4           | 1.5         | 15.4         | 19.1                       | 226.1          | 17.5           |
| USA                             | 18.2                      | 66.3         | 62.9                              | 141.9          | 2.3         | 8.9          | 16.4                       | 316.9          | 3.9            |
| Other America                   | 4.8                       | 8.5          | 25.6                              | 37.0           | 1.1         | 2.6          | 4.8                        | 84.4           | -3.0           |
| Middle East and<br>North Africa | 1.4                       | 3.0          | 11.2                              | 13.3           | 0.2         | 0.6          | 2.8                        | 32.5           | 13.1           |
| Other Africa                    | 2.1                       | 5.6          | 18.7                              | 21.6           | 0.3         | 0.9          | 3.8                        | 53.0           | 25.7           |
| Not stated                      | 0.0                       | 0.2          | 0.3                               | 0.2            | 0.0         | 0.1          | 0.4                        | 1.2            | -24.5          |
| <b>Total</b>                    | <b>112.9</b>              | <b>391.9</b> | <b>781.3</b>                      | <b>2 518.3</b> | <b>23.7</b> | <b>131.1</b> | <b>205.6</b>               | <b>4 164.8</b> | <b>11.8</b>    |

Source: Overseas Arrivals and Departures, Australia (3401.0).

The long distances most international visitors have to travel to Australia contributes to a relatively long stay in this country. In 1996, nearly 40% of visitors stayed for more than two weeks, while almost 20% stayed for more than a month (table 22.7). The relatively high number

of visitors who are visiting friends or relatives (70% of whom stayed for more than two weeks) also contributed to the relatively long stay. Visitors arriving for 'education' purposes also tend to be long stayers, but their numbers are relatively small.

## 22.7 INBOUND VISITORS, By Intended Length of Stay and Main Purpose of Trip — 1996

| Intended length of stay            | Main purpose of trip      |              |                                   |                |                 |              |                            | Total Visitors | Proportion of total |
|------------------------------------|---------------------------|--------------|-----------------------------------|----------------|-----------------|--------------|----------------------------|----------------|---------------------|
|                                    | Convention/<br>conference | Business     | Visiting<br>friends/<br>relatives | Holiday        | Employ-<br>ment | Education    | Other<br>and not<br>stated |                |                     |
|                                    | '000                      | '000         | '000                              | '000           | '000            | '000         | '000                       | '000           | %                   |
| Under 1 week                       | 34.3                      | 179.5        | 81.0                              | 899.6          | 2.2             | 5.7          | 71.9                       | 1 274.2        | 30.6                |
| 1 week and under<br>2 weeks        | 53.9                      | 113.1        | 153.2                             | 906.8          | 0.9             | 10.5         | 75.2                       | 1 313.6        | 31.5                |
| 2 weeks and<br>under<br>1 month    | 20.5                      | 51.2         | 240.5                             | 415.5          | 1.1             | 8.4          | 22.2                       | 759.4          | 18.2                |
| 1 month and<br>under<br>2 months   | 3.4                       | 21.6         | 163.0                             | 164.7          | 2.2             | 8.6          | 12.4                       | 375.9          | 9.0                 |
| 2 months and<br>under<br>3 months  | 0.3                       | 8.7          | 51.6                              | 42.5           | 1.3             | 8.2          | 4.6                        | 117.2          | 2.8                 |
| 3 months and<br>under<br>6 months  | 0.4                       | 10.9         | 61.7                              | 47.9           | 3.8             | 24.7         | 7.5                        | 156.9          | 3.8                 |
| 6 months and<br>under<br>12 months | 0.1                       | 6.9          | 30.3                              | 41.3           | 12.2            | 65.0         | 11.8                       | 167.6          | 4.0                 |
| <b>Total</b>                       | <b>112.9</b>              | <b>391.9</b> | <b>781.3</b>                      | <b>2 518.3</b> | <b>23.7</b>     | <b>131.1</b> | <b>205.6</b>               | <b>4 164.8</b> | <b>100.0</b>        |

Source: Overseas Arrivals and Departures, Australia (3401.0).

Visitor arrivals are seasonal and numbers fluctuate somewhat during the year. In 1996, the most arrivals were in December, with 11% of total arrivals, while the fewest arrivals were in May, with just over 6% of total arrivals (table 22.8). However, seasonality is not as strong as for arrivals to many other destination countries. Outside December and May, the proportions of total arrivals only ranged from 7% to 9%. A number of factors contribute to the relative lack of seasonality, primarily the attractive climate in many parts of the country

throughout the whole year, and the wide diversity of source countries of visitors to Australia.

New South Wales is by far the most popular State for all categories of international visitors. In 1996, 39% of all nights spent by international visitors were spent in New South Wales. Queensland was the next most popular State, accounting for 22% of all international visitor nights. Victoria accounted for 17% and Western Australia 11% of international visitor nights (table 22.9).

## 22.8 INBOUND VISITORS, By Month and Main Purpose of Trip — 1996

| Month        | Main purpose of trip      |              |                                   |                |             |              |                            | Total Visitors | Proportion of total |
|--------------|---------------------------|--------------|-----------------------------------|----------------|-------------|--------------|----------------------------|----------------|---------------------|
|              | Convention/<br>conference | Business     | Visiting<br>friends/<br>relatives | Holiday        | Employment  | Education    | Other<br>and not<br>stated |                |                     |
|              | '000                      | '000         | '000                              | '000           | '000        | '000         | '000                       | '000           | %                   |
| January      | 4.3                       | 27.2         | 57.8                              | 187.3          | 2.6         | 19.6         | 18.3                       | 317.1          | 7.6                 |
| February     | 8.1                       | 31.9         | 61.6                              | 247.9          | 2.0         | 24.1         | 17.1                       | 392.7          | 9.4                 |
| March        | 9.2                       | 37.5         | 68.1                              | 223.1          | 2.0         | 9.1          | 16.6                       | 365.6          | 8.8                 |
| April        | 13.0                      | 32.0         | 63.9                              | 196.7          | 2.2         | 9.3          | 16.1                       | 333.2          | 8.0                 |
| May          | 7.8                       | 32.0         | 44.6                              | 157.6          | 1.4         | 4.6          | 13.5                       | 261.5          | 6.3                 |
| June         | 9.2                       | 32.2         | 56.5                              | 182.7          | 1.8         | 7.2          | 17.3                       | 306.9          | 7.4                 |
| July         | 10.3                      | 32.4         | 59.2                              | 207.9          | 2.2         | 25.9         | 20.3                       | 358.2          | 8.6                 |
| August       | 9.1                       | 32.3         | 52.8                              | 208.9          | 1.7         | 6.5          | 17.9                       | 329.2          | 7.9                 |
| September    | 12.4                      | 32.3         | 57.7                              | 182.4          | 1.7         | 6.7          | 16.0                       | 309.2          | 7.4                 |
| October      | 12.6                      | 38.0         | 64.9                              | 205.7          | 2.2         | 8.9          | 18.1                       | 350.4          | 8.4                 |
| November     | 12.8                      | 39.7         | 74.3                              | 225.0          | 2.1         | 4.9          | 16.8                       | 375.6          | 9.0                 |
| December     | 4.1                       | 24.4         | 119.9                             | 293.1          | 1.8         | 4.3          | 17.6                       | 465.2          | 11.2                |
| <b>Total</b> | <b>112.9</b>              | <b>391.9</b> | <b>781.3</b>                      | <b>2 518.3</b> | <b>23.7</b> | <b>131.1</b> | <b>205.6</b>               | <b>4 164.8</b> | <b>100.0</b>        |

Source: Overseas Arrivals and Departures, Australia (3401.0).

## 22.9 INBOUND VISITOR NIGHTS, By State/Territory and Main Purpose of Trip — 1996

| State/Territory              | Main purpose of trip |                               |               |                      | Total         | Total        |
|------------------------------|----------------------|-------------------------------|---------------|----------------------|---------------|--------------|
|                              | Business             | Visiting<br>friends/relatives | Holiday       | All other<br>reasons |               |              |
|                              | '000                 | '000                          | '000          | '000                 | '000          | %            |
| New South Wales              | 2 615                | 7 485                         | 12 834        | 11 996               | 34 930        | 38.7         |
| Victoria                     | 1 059                | 4 597                         | 4 182         | 5 400                | 15 238        | 16.9         |
| Queensland                   | 512                  | 5 448                         | 11 198        | 2 686                | 19 844        | 22.0         |
| South Australia              | 341                  | 845                           | 1 202         | 1 574                | 3 962         | 4.4          |
| Western Australia            | 482                  | 2 602                         | 3 907         | 3 106                | 10 097        | 11.2         |
| Tasmania                     | 23                   | 346                           | 396           | 485                  | 1 250         | 1.4          |
| Northern Territory           | 74                   | 225                           | 2 139         | 296                  | 2 734         | 3.0          |
| Australian Capital Territory | 187                  | 321                           | 441           | 1 112                | 2 061         | 2.3          |
| Not stated                   | 7                    | 4                             | 24            | 1                    | 36            | 0.0          |
| <b>Australia</b>             | <b>5 300</b>         | <b>21 873</b>                 | <b>36 323</b> | <b>26 656</b>        | <b>90 152</b> | <b>100.0</b> |

Source: International Visitor Survey, Bureau of Tourism Research.

## Expenditure

In 1996, international visitors to Australia each spent an average of \$3,851 on their trip. Not

surprisingly, because of their expenditure on the long distance travel to and from Australia, the highest spenders tended to be visitors from Europe and North America. Highest spenders

were visitors from 'Other Europe', who each spent an average of \$5,548. The lowest average expenditure, \$1,858 per visitor, was by visitors from New Zealand (table 22.10).

After paying for package tours and pre-paid international airfares, expenditure on food, drink and accommodation was the next major expenditure item, averaging \$681 per visitor. High spenders on food, drink and accommodation tended to be from Europe and North America, while visitors from Asian countries tended to be the highest spenders on

shopping. Visitors from Japan (\$728) recorded the highest average expenditure on shopping, followed by Thailand (\$693), Korea (\$582) and Indonesia (\$565).

Persons visiting for 'other' reasons (e.g. education, employment, health) were the highest spenders on average, followed by business visitors. Relatively high expenditure on food, drink and accommodation contributed to an overall high average expenditure by business visitors. Holiday visitors were the highest spenders on shopping (table 22.11).

## 22.10 AVERAGE VISITOR EXPENDITURE, By Country of Residence and Expenditure Item — 1996

|                         | Items of expenditure |                                       |           |                                  |          |                               |                  |       |       |
|-------------------------|----------------------|---------------------------------------|-----------|----------------------------------|----------|-------------------------------|------------------|-------|-------|
|                         | Package<br>Tours     | Pre-paid<br>International<br>airfares | Transport | Food, drink and<br>accommodation | Shopping | Entertainment<br>and gambling | Capital<br>goods | Other | Total |
| Country of<br>residence | \$                   | \$                                    | \$        | \$                               | \$       | \$                            | \$               | \$    | \$    |
| New Zealand             | 233                  | 510                                   | 118       | 446                              | 347      | 89                            | 17               | 98    | 1 858 |
| Germany                 | 1 278                | 1 664                                 | 534       | 1 163                            | 315      | 85                            | 179              | 315   | 5 533 |
| United Kingdom          | 659                  | 1 693                                 | 283       | 1 010                            | 277      | 121                           | 32               | 288   | 4 363 |
| Other Europe            | 1 061                | 1 727                                 | 478       | 1 309                            | 363      | 129                           | 109              | 372   | 5 548 |
| Indonesia               | 453                  | 659                                   | 142       | 789                              | 565      | 398                           | 166              | 1 034 | 4 206 |
| Malaysia                | 437                  | 590                                   | 111       | 625                              | 468      | 154                           | 238              | 635   | 3 258 |
| Singapore               | 635                  | 500                                   | 121       | 584                              | 461      | 245                           | 108              | 536   | 3 190 |
| Hong Kong               | 670                  | 774                                   | 174       | 770                              | 411      | 180                           | 117              | 942   | 4 038 |
| Japan                   | 2 594                | 255                                   | 61        | 349                              | 728      | 47                            | 8                | 118   | 4 160 |
| Korea                   | 1 401                | 388                                   | 91        | 604                              | 582      | 131                           | 47               | 400   | 3 644 |
| Taiwan                  | 1 609                | 359                                   | 75        | 435                              | 559      | 77                            | 101              | 564   | 3 779 |
| Thailand                | 625                  | 545                                   | 118       | 699                              | 693      | 162                           | 8                | 674   | 3 524 |
| China                   | 668                  | 1 140                                 | 287       | 936                              | 481      | 240                           | 38               | 442   | 4 232 |
| Other Asia              | 147                  | 1 222                                 | 168       | 696                              | 492      | 135                           | 91               | 587   | 3 538 |
| USA                     | 1 292                | 1 809                                 | 262       | 943                              | 285      | 90                            | 44               | 223   | 4 948 |
| Canada                  | 915                  | 1 713                                 | 266       | 1 121                            | 249      | 163                           | 50               | 665   | 5 142 |
| Other countries         | 306                  | 1 290                                 | 161       | 563                              | 484      | 47                            | 216              | 318   | 3 385 |
| All countries           | 1 113                | 882                                   | 182       | 681                              | 470      | 115                           | 68               | 340   | 3 851 |

Source: International Visitor Survey, Bureau of Tourism Research.

## 22.11 AVERAGE VISITOR EXPENDITURE, By Main Purpose of Trip — 1996

| Expenditure items              | Main purpose of trip |                                |              |                   | Total        |
|--------------------------------|----------------------|--------------------------------|--------------|-------------------|--------------|
|                                | Business             | Visiting friends and relatives | Holiday      | All other reasons |              |
|                                | \$                   | \$                             | \$           | \$                | \$           |
| Package Tours                  | 261                  | 196                            | 1 656        | 531               | 1 113        |
| Prepaid International airfares | 1 808                | 1 185                          | 597          | 1 055             | 882          |
| Transport                      | 222                  | 168                            | 158          | 298               | 182          |
| Food, drink and accommodation  | 1 057                | 506                            | 531          | 1 405             | 681          |
| Shopping                       | 300                  | 431                            | 533          | 358               | 470          |
| Entertainment and gambling     | 96                   | 98                             | 107          | 205               | 115          |
| Capital goods                  | 74                   | 120                            | 33           | 157               | 68           |
| Other                          | 179                  | 244                            | 129          | 1 700             | 340          |
| <b>All items</b>               | <b>3 997</b>         | <b>2 948</b>                   | <b>3 744</b> | <b>5 709</b>      | <b>3 851</b> |

Source: International Visitor Survey, Bureau of Tourism Research.

### Inbound tour operators

Of the total 2.4 million overseas 'holiday' visitors who arrived in Australia during 1995–96, inbound tour operators handled 1.6 million (68%). These overseas visitors coming to Australia on package tours paid a total of \$1.4b to Australian inbound tour operators for the Australian content of their tour.

Passengers from Japan accounted for 42% of the total passengers involved and 56% of the total value of gross invoices (i.e. all amounts received for ground content, e.g. coach transfers, accommodation, meals, cruises, etc., received in Australia). Passengers from Asia (excluding Japan) represented 33% of total passengers and accounted for 21% of the total value of gross invoices.

The Americas accounted for 7% of passengers and 8% of the total value of gross invoices, Europe (including the United Kingdom and Ireland) for 14% of passengers and 14% of gross invoices, and New Zealand and the South Pacific for 3% of passengers and 1% of the total value of gross invoices.

At 30 June 1996, inbound tour operators employed 3,000 persons full time and 720 persons part time in Australia. In addition, they employed 410 persons full time overseas.

### Australia's tourism marketing expenditure overseas

During 1994–95, Australian tourism-related organisations spent more than \$265m on marketing their products overseas. Of this total expenditure, 27% was directed towards the United Kingdom and Europe, 26% towards the

Japanese market, 20% towards the United States and Canada, and 20% towards Asia (excluding Japan).

Of the total \$265m, the majority (71%) was independent expenditure, while 15% was spent in cooperation with the Australian Tourist Commission and 14 per cent was in cooperation with other organisations.

Of the total tourism marketing expenditure overseas by Australian tourism-related organisations, 20% was by inbound tour operators, 14% by accommodation operators, 14% by State tourism authorities, and 4% by coach operators.

### International outbound tourism

While the number of foreign visitors coming to Australia has grown rapidly in recent years, the number of Australian residents visiting overseas has also increased (table 22.12). However, the increase has been smaller, and since around the mid-1980s the number of inbound visitors has generally been higher than the number of outbound visitors. Consequently, tourism has been improving the net contribution of the travel item to Australia's balance on current account.



**22.12 AUSTRALIANS TRAVELLING ABROAD**

| Year | no.       | change |
|------|-----------|--------|
|      |           | %      |
| 1991 | 2 099 400 | -3.2   |
| 1992 | 2 276 300 | 8.4    |
| 1993 | 2 267 100 | -0.4   |
| 1994 | 2 354 300 | 3.8    |
| 1995 | 2 518 600 | 7.0    |
| 1996 | 2 732 000 | 8.5    |

Source: *Overseas Arrivals and Departures, Australia (3401.0)*.

Australians travel abroad to visit a wide variety of main destinations. As table 22.13 shows, the most popular main destination is New Zealand, which was the main destination for 15% of Australian residents visiting overseas in 1996. This was followed by the United States, the main destination for over 12%, and the United Kingdom, the main destination for nearly 11% of Australian residents visiting abroad. In Asia, Indonesia was the most popular main

destination country (almost 10%), while other Australian visitors to Asia chose a wide variety of countries as their main destination.

Nearly a half (46%) of Australian residents visiting abroad in 1996 went for 'holiday' purposes, while a further 25% went to 'visit friends/relatives'. For all destination countries/regions, the largest category of Australian visitors was 'holiday', except in the Philippines and 'Other Asia' where 'visiting friends/relatives' was the largest category, and China where 'Business' was the largest category. Other destinations which attracted a relatively high proportion of Australians 'visiting friends/relatives' were Middle East/North Africa, 'Other Europe', New Zealand, the United Kingdom and Italy.

Australians travelling for 'business' purposes accounted for 18% of Australian outbound travellers. Their main destinations were New Zealand, the United States, 'Other Asia' and Hong Kong.

**22.13 AUSTRALIANS TRAVELLING ABROAD, By Main Destination and Main Purpose of Trip — 1996**

| Country/region of residence     | Main purpose of trip      |              |                                   |                |             |             |                               | Total          | Change on 1995 |
|---------------------------------|---------------------------|--------------|-----------------------------------|----------------|-------------|-------------|-------------------------------|----------------|----------------|
|                                 | Convention/<br>conference | Business     | Visiting<br>friends/<br>relatives | Holiday        | Employment  | Education   | Other<br>and<br>not<br>stated |                |                |
|                                 | '000                      | '000         | '000                              | '000           | '000        | '000        | '000                          |                |                |
| Fiji                            | 1.6                       | 7.0          | 9.1                               | 50.5           | 0.9         | 0.5         | 2.3                           | 71.9           | -3.6           |
| New Zealand                     | 15.3                      | 87.9         | 141.3                             | 146.7          | 6.2         | 2.7         | 14.8                          | 414.9          | 11.7           |
| Other Oceania                   | 1.7                       | 20.4         | 12.5                              | 59.9           | 13.9        | 2.9         | 4.7                           | 116.0          | 5.2            |
| Italy                           | 2.4                       | 4.9          | 17.5                              | 30.3           | 0.1         | 1.0         | 2.0                           | 58.2           | 15.7           |
| United Kingdom                  | 6.5                       | 26.8         | 93.6                              | 145.3          | 5.4         | 3.1         | 8.4                           | 289.1          | 8.9            |
| Other Europe                    | 10.3                      | 31.6         | 87.8                              | 95.7           | 3.2         | 3.9         | 8.5                           | 241.0          | 5.8            |
| Indonesia                       | 5.0                       | 32.6         | 12.4                              | 197.6          | 3.9         | 2.6         | 5.7                           | 259.8          | 16.9           |
| Malaysia                        | 2.9                       | 24.2         | 24.6                              | 37.2           | 3.5         | 1.1         | 3.6                           | 97.1           | 9.6            |
| Philippines                     | 1.3                       | 10.2         | 24.9                              | 16.6           | 0.5         | 0.5         | 2.1                           | 56.1           | 8.9            |
| Singapore                       | 5.3                       | 33.0         | 13.9                              | 37.3           | 4.5         | 1.2         | 4.0                           | 99.2           | 4.3            |
| Thailand                        | 2.6                       | 12.8         | 8.6                               | 52.9           | 1.2         | 0.8         | 2.3                           | 81.2           | 7.8            |
| China                           | 1.4                       | 17.1         | 15.4                              | 15.6           | 1.3         | 1.9         | 1.9                           | 54.6           | 3.4            |
| Hong Kong                       | 3.9                       | 44.0         | 44.9                              | 59.4           | 8.7         | 1.7         | 5.2                           | 167.8          | 6.9            |
| Other Asia                      | 5.3                       | 47.5         | 76.3                              | 58.7           | 5.9         | 5.5         | 7.2                           | 206.4          | 5.1            |
| USA                             | 31.4                      | 64.6         | 42.1                              | 174.6          | 4.0         | 4.9         | 9.5                           | 331.1          | 5.4            |
| Other America                   | 3.7                       | 7.2          | 21.1                              | 31.6           | 1.1         | 1.0         | 3.0                           | 68.7           | 11.8           |
| Middle East and<br>North Africa | 1.1                       | 5.8          | 22.9                              | 24.4           | 2.3         | 1.2         | 2.7                           | 60.4           | 11.7           |
| Other Africa                    | 1.1                       | 7.7          | 14.4                              | 19.8           | 1.1         | 0.8         | 2.1                           | 47.0           | 17.9           |
| Not stated                      | 0.1                       | 1.0          | 0.4                               | 9.2            | 0.5         | 0.1         | 0.2                           | 11.5           | 9.1            |
| <b>Total</b>                    | <b>102.9</b>              | <b>486.3</b> | <b>683.7</b>                      | <b>1 263.3</b> | <b>68.2</b> | <b>37.4</b> | <b>90.2</b>                   | <b>2 732.0</b> | <b>100.0</b>   |

Source: *Overseas Arrivals and Departures, Australia (3401.0)*.

The relatively long distances for Australian residents travelling to other countries are reflected in the relatively long periods of stay abroad. In 1996, only 11% stayed abroad less than a week, while 37% stayed away for over a month (table 22.14). In addition to distances involved in getting to destination countries, the high proportion of Australians 'visiting friends/relatives' also contributed to long periods of stay, as such travellers traditionally tend to stay in destination countries longer than other types of visitors. In 1996, some 56% of such visitors stayed away for over a month.

While the numbers of Australian residents departing for visits abroad varies from month to month, there are not great seasonal fluctuations. Table 22.15 shows that the largest number of departures in 1996 was in December (11%), followed by September (10%) while February recorded the least number of departures (6%). In general, the Australian winter months were more popular than the summer months for departing to other countries.

## 22.14 AUSTRALIANS TRAVELLING ABROAD, Intended Length of Stay and Main Purpose of Trip — 1996

|                              | Main purpose of trip      |              |                                   |                |                 |             |                               | Total          | Proportion of total |
|------------------------------|---------------------------|--------------|-----------------------------------|----------------|-----------------|-------------|-------------------------------|----------------|---------------------|
|                              | Convention/<br>conference | Business     | Visiting<br>friends/<br>relatives | Holiday        | Employ-<br>ment | Education   | Other<br>and<br>not<br>stated |                |                     |
| Intended length of stay      | '000                      | '000         | '000                              | '000           | '000            | '000        | '000                          | '000           | %                   |
| Under 1 week                 | 23.2                      | 151.7        | 34.8                              | 72.8           | 4.7             | 3.0         | 9.8                           | 300.0          | 11.0                |
| 1 week and under 2 weeks     | 39.5                      | 131.2        | 89.2                              | 398.3          | 4.8             | 7.3         | 20.9                          | 691.2          | 25.3                |
| 2 weeks and under 1 month    | 28.7                      | 103.9        | 178.6                             | 373.8          | 8.7             | 9.4         | 19.1                          | 722.2          | 26.4                |
| 1 month and under 2 months   | 8.7                       | 45.0         | 193.7                             | 233.3          | 7.8             | 4.2         | 12.8                          | 505.5          | 18.5                |
| 2 months and under 3 months  | 1.7                       | 20.7         | 78.1                              | 86.1           | 5.7             | 2.1         | 6.5                           | 200.9          | 7.4                 |
| 3 months and under 6 months  | 0.9                       | 18.8         | 72.7                              | 58.9           | 11.0            | 3.5         | 8.0                           | 173.8          | 6.4                 |
| 6 months and under 12 months | 0.2                       | 15.0         | 36.6                              | 40.1           | 25.5            | 7.9         | 13.1                          | 138.4          | 5.1                 |
| <b>Total</b>                 | <b>102.9</b>              | <b>486.3</b> | <b>683.7</b>                      | <b>1 263.3</b> | <b>68.2</b>     | <b>37.4</b> | <b>90.2</b>                   | <b>2 732.0</b> | <b>100.0</b>        |

Source: Overseas Arrivals and Departures, Australia (3401.0).

## 22.15 AUSTRALIANS TRAVELLING ABROAD, By Month of Departure and Main Purpose of Trip — 1996

|              | Main purpose of trip      |              |                                   |                |             |             |                            | Total          | Proportion of total |
|--------------|---------------------------|--------------|-----------------------------------|----------------|-------------|-------------|----------------------------|----------------|---------------------|
|              | Convention/<br>conference | Business     | Visiting<br>friends/<br>relatives | Holiday        | Employment  | Education   | Other<br>and not<br>stated |                |                     |
| Month        | '000                      | '000         | '000                              | '000           | '000        | '000        | '000                       | '000           | %                   |
| January      | 5.5                       | 34.9         | 40.4                              | 75.7           | 7.9         | 3.7         | 7.7                        | 175.8          | 6.4                 |
| February     | 6.2                       | 36.4         | 43.7                              | 66.3           | 5.6         | 2.1         | 6.9                        | 167.2          | 6.1                 |
| March        | 8.4                       | 43.5         | 60.2                              | 107.9          | 5.7         | 2.4         | 7.8                        | 235.9          | 8.6                 |
| April        | 8.9                       | 41.4         | 46.1                              | 93.4           | 6.4         | 2.7         | 8.5                        | 207.4          | 7.6                 |
| May          | 10.5                      | 42.9         | 54.6                              | 94.3           | 4.8         | 1.7         | 7.1                        | 215.9          | 7.9                 |
| June         | 11.0                      | 42.9         | 69.5                              | 120.5          | 4.9         | 4.1         | 8.9                        | 261.8          | 9.6                 |
| July         | 7.5                       | 38.0         | 57.8                              | 115.7          | 6.3         | 3.3         | 8.2                        | 236.8          | 8.7                 |
| August       | 9.7                       | 41.6         | 47.9                              | 107.0          | 5.7         | 3.7         | 6.8                        | 222.4          | 8.1                 |
| September    | 12.5                      | 47.6         | 58.2                              | 144.3          | 5.3         | 5.1         | 8.5                        | 281.5          | 10.3                |
| October      | 10.3                      | 45.6         | 42.3                              | 102.2          | 5.5         | 2.2         | 6.0                        | 214.1          | 7.8                 |
| November     | 8.9                       | 43.6         | 57.1                              | 94.8           | 5.2         | 2.8         | 5.8                        | 218.2          | 8.0                 |
| December     | 3.5                       | 27.9         | 105.9                             | 141.2          | 4.9         | 3.6         | 8.0                        | 295.0          | 10.8                |
| <b>Total</b> | <b>102.9</b>              | <b>486.3</b> | <b>683.7</b>                      | <b>1 263.3</b> | <b>68.2</b> | <b>37.4</b> | <b>90.2</b>                | <b>2 732.0</b> | <b>100.0</b>        |

Source: Overseas Arrivals and Departures, Australia (3401.0).

## Tourist accommodation

Estimates of the origin of guests staying in hotels, motels and guest houses in Australia during 1994–95 indicate that overseas visitors accounted for 23% of room nights occupied in these establishments. This compares with 37% for interstate visitors and 40% for intrastate visitors (see table 22.16).

Queensland and the Northern Territory had the highest proportions of overseas visitor nights to total visitor nights, each having 29%. Next highest were New South Wales with 25% and Western Australia with 20%, followed by Victoria (17%), the Australian Capital Territory (13%), South Australia (12%) and Tasmania (8%). The strong popularity of New South Wales and Queensland is reflected in the fact that 70% of overseas guest nights in hotels, motels and guest houses were spent in these States.

The Australian Capital Territory, Tasmania and the Northern Territory were the most dependent on interstate visitors, who accounted for a half or more of those guest nights. At the other end of the scale, in New South Wales and Queensland, interstate visitors accounted for only a third of total guest nights in hotels, motels and guest houses.

As shown in table 22.17, at December 1996 there were 173,876 rooms available in Australia in hotels, motels and guest houses with facilities (ie. with bathroom facilities in most rooms). This was an increase of nearly 3% over the number available at December 1995. The number of

holiday flats, units and houses available for short-term letting increased by 7% (to 42,186) over the same period. At December 1996, there were 30,208 beds available in 'visitor hostels' in Australia, an increase of 12% over December 1995. The capacity of caravan parks in Australia remained virtually unchanged over this period.

During 1996, the supply of hotel, motel and guest house accommodation in Australia kept pace with demand as both increased by nearly 3%. Similarly, for holiday flats/units and caravan parks, changes in supply and demand were in balance. For visitor hostels, however, the increase in supply (12%) was greater than the increase in demand (9%).

In the year ended 31 December 1996, the average length of stay in licensed hotels with facilities was 2.4 days and for motels 1.9 days. For visitor hostels, the average length of stay was 2.6 days, but for holiday flats, units and houses it was 5.1 days.

New South Wales was the State with the most commercial tourist accommodation available. At December 1996, a third (33% or 57,582 guest rooms) of Australia's tourist accommodation capacity in hotels, motels and guest houses with facilities was in New South Wales. Nearly a half (44% or 25,430 guest rooms) of the New South Wales capacity was concentrated in the Sydney Statistical Division. Queensland had 26% (44,373 guest rooms), and Victoria had 17% (29,918 guest rooms) of Australia's hotel, motel and guest house capacity.

**22.16 GUEST NIGHTS IN HOTELS, MOTELS AND GUEST HOUSES WITH FACILITIES, 1994–95**

| State/Territory              | Origin of guests |               |              | Total         |
|------------------------------|------------------|---------------|--------------|---------------|
|                              | Intrastate       | Interstate    | Overseas     |               |
|                              | '000             | '000          | '000         | '000          |
| New South Wales              | 5 076            | 3 949         | 2 963        | 11 988        |
| Victoria                     | 2 511            | 2 158         | 986          | 5 655         |
| Queensland                   | 3 616            | 3 054         | 2 715        | 9 385         |
| South Australia              | 845              | 902           | 233          | 1 980         |
| Western Australia            | 1 425            | 1 128         | 643          | 3 196         |
| Tasmania                     | 326              | 638           | 89           | 1 053         |
| Northern Territory           | 241              | 576           | 332          | 1 149         |
| Australian Capital Territory | 36               | 706           | 110          | 852           |
| <b>Total</b>                 | <b>14 076</b>    | <b>13 111</b> | <b>8 071</b> | <b>35 258</b> |

Source: *Experimental Estimates of the Origin of Guests, Hotels, Motels and Guest Houses, Australia, 1994–95* (9501.0).

## 22.17 TOURIST ACCOMMODATION, 1996(a)

|                                           | Unit   | March quarter | June quarter | September quarter | December quarter |
|-------------------------------------------|--------|---------------|--------------|-------------------|------------------|
| <b>Licensed hotels with facilities(b)</b> |        |               |              |                   |                  |
| Establishments                            | no.    | 1 134         | 1 147        | 1 135             | 1 140            |
| Guest rooms                               | no.    | 69 055        | 69 785       | 69 782            | 71 106           |
| Bed spaces                                | no.    | 184 436       | 186 887      | 187 114           | 191 113          |
| Room occupancy rates                      | %      | 64.7          | 60.4         | 62.9              | 65.5             |
| Bed occupancy rates                       | %      | 40.5          | 36.5         | 39.0              | 40.7             |
| Gross takings from accommodation          | \$'000 | 501 333       | 469 277      | 496 715           | 545 699          |
| <b>Motels, etc.(b)</b>                    |        |               |              |                   |                  |
| Establishments                            | no.    | 3 729         | 3 757        | 3 748             | 3 763            |
| Guest rooms                               | no.    | 101 555       | 102 587      | 102 639           | 102 770          |
| Bed spaces                                | no.    | 307 828       | 312 012      | 312 684           | 313 010          |
| Room occupancy rates                      | %      | 55.2          | 53.3         | 55.9              | 56.0             |
| Bed occupancy rates                       | %      | 33.3          | 31.2         | 33.2              | 33.4             |
| Gross takings from accommodation          | \$'000 | 372 167       | 366 489      | 400 402           | 400 410          |
| <b>Total hotels and motels etc.(b)</b>    |        |               |              |                   |                  |
| Establishments                            | no.    | 4 863         | 4 904        | 4 883             | 4 903            |
| Guest rooms                               | no.    | 170 610       | 172 372      | 172 421           | 173 876          |
| Bed spaces                                | no.    | 492 264       | 498 899      | 499 798           | 504 123          |
| Room occupancy rates                      | %      | 59.0          | 56.1         | 58.8              | 59.9             |
| Bed occupancy rates                       | %      | 36.0          | 33.2         | 35.4              | 36.2             |
| Gross takings from accommodation          | \$'000 | 873 500       | 835 766      | 897 117           | 946 110          |
| <b>Caravan parks(c)</b>                   |        |               |              |                   |                  |
| Establishments                            | no.    | 2 705         | 2 706        | 2 707             | 2 701            |
| Powered sites                             | no.    | 204 195       | 203 369      | 203 157           | 202 896          |
| Unpowered sites                           | no.    | 67 107        | 67 076       | 66 577            | 66 325           |
| Cabins, flats etc.                        | no.    | 17 262        | 17 546       | 18 108            | 18 627           |
| Total capacity                            | no.    | 288 564       | 287 991      | 287 842           | 287 848          |
| Site occupancy rates(d)                   | %      | 45.3          | 43.3         | 44.4              | 43.4             |
| Gross takings from accommodation          | \$'000 | 126 990       | 112 371      | 120 923           | 128 390          |
| <b>Holiday flats, units and houses(b)</b> |        |               |              |                   |                  |
| Flats, units etc.                         |        |               |              |                   |                  |
| One bedroom                               | no.    | 8 667         | 8 710        | 8 921             | 9 116            |
| Multiple bedroom                          | no.    | 31 428        | 31 249       | 31 740            | 33 070           |
| Total flats, units etc.                   | no.    | 40 095        | 39 959       | 40 661            | 42 186           |
| Bed spaces                                | no.    | 175 189       | 174 380      | 177 346           | 184 963          |
| Unit occupancy rates                      | %      | 56.9          | 44.9         | 56.0              | 54.0             |
| Gross takings from accommodation          | \$'000 | 149 597       | 109 063      | 143 671           | 152 936          |
| <b>Visitor hostels(e)</b>                 |        |               |              |                   |                  |
| Establishments                            | no.    | 449           | 456          | 476               | 479              |
| Bed spaces                                | no.    | 27 788        | 28 469       | 29 551            | 30 208           |
| Bed occupancy rates                       | %      | 48.5          | 44.7         | 45.0              | 46.4             |
| Gross takings from accommodation          | \$'000 | 16 518        | 15 552       | 16 647            | 17 791           |

(a) A tourist accommodation establishment is defined as an establishment which predominantly provides short-term accommodation (i.e., for periods of less than two months) available to the general public. (b) For definitions see Tourist Accommodation, Australia (8635.0). (c) Includes long-term caravan parks. For definitions see Tourist Accommodation, Australia (8635.0). (d) Caravan park sites etc. permanently reserved but only casually occupied by their tenants have been recorded continuously as site nights occupied irrespective of whether the tenants of individual sites were in residence on any particular night. (e) 'Backpacker' accommodation.

Source: Tourist Accommodation, Australia (8635.0).

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## Introduction

Transport can be described broadly as the movement of goods or persons from an origin to a destination. It is one of the most fundamental aspects of an advanced economy. Buildings cannot be constructed without transportation of materials and persons, food must be transported from farms to shops, and persons must travel to get to and from work, recreation and other facilities. Transport has enormous economic and social impact, generates substantial employment and contributes significantly to Gross Domestic Product, with numerous support industries ranging from automotive manufacturers to travel agencies. There are also social costs of transport — such as road accidents, traffic congestion, fuel emissions, aircraft noise pollution and shipping oil spills. Information about all aspects of transport and its support industries is vital to effective planning by governments and industry.

## Road transport

### Length of the road system

The most recent information available on lengths of roads open for general traffic in Australia is shown in table 23.1 below. The information is classified according to broad

surface groups as defined by the respective States and Territories.

### Registered motor vehicles

Censuses of registered motor vehicles have been conducted in respect of 31 December 1955 and 1962; 30 September 1971, 1976, 1979, 1982, 1985, 1988 and 1991; 30 June 1993 and 31 May 1995.

As shown in table 23.2, the number of motor vehicles (excluding motor cycles) steadily increased in every Motor Vehicle Census since 1982. The number of motor cycles fluctuated over this period, falling substantially from 1982 to 1991 before increases in 1993 and 1995.

There were 10,947,530 motor vehicles (excluding tractors, plant and equipment, caravans and trailers) registered in Australia at 31 May 1995 (table 23.3). This represents an increase of 443,380 vehicles (4.2%) since 30 June 1993.

Table 23.4 shows the average age of vehicle by type of vehicle. The average age of the total motor vehicle fleet increased by 0.2 years, from 10.4 years in 1993 to 10.6 years in 1995. Over 82% (9,006,133) of all vehicles on register were five or more years old. The average age of buses fell, in contrast to the average age of other vehicles, which increased.

**23.1 LENGTHS OF ROADS OPEN FOR GENERAL TRAFFIC, 30 June**

|                                                 | NSW(a)<br>1997 | Vic.(b)<br>1997 | Qld<br>1996    | SA<br>1997    | WA(c)<br>1997  | Tas.(d)<br>1997 | NT(e)<br>1997 | ACT<br>1997  |
|-------------------------------------------------|----------------|-----------------|----------------|---------------|----------------|-----------------|---------------|--------------|
| Surface of roads                                | km             | km              | km             | km            | km             | km              | km            | km           |
| Bitumen or concrete                             | 87 188         | 72 674          | 65 129         | 26 233        | 45 845         | 10 012          | 6 255         | 2 457        |
| Gravel, crushed stone or other improved surface | 93 761         | 50 952          | 50 594         | 41 189        | 52 234         | 12 290          | 6 344         | 134          |
| Formed only                                     | (f)            | 34 442          | 44 606         | 20 393        | 32 219         | 841             | 4 577         | —            |
| Cleared only                                    | n.a.           | (g)             | 16 703         | 7 953         | 14 962         | 0               | 3 088         | —            |
| <b>Total</b>                                    | <b>180 949</b> | <b>158 068</b>  | <b>177 032</b> | <b>95 768</b> | <b>145 260</b> | <b>23 143</b>   | <b>20 264</b> | <b>2 591</b> |

(a) Excludes Lord Howe Island, forestry controlled roads or crown roads. (b) Excludes roads coming under the responsibility of the Department of Conservation and Natural Resources. (c) Excludes approximately 25,300 kilometres of forestry roads. (d) Forestry roads have been reclassified from cleared only to gravel. (e) Excludes roads in towns and Local Government Areas. There have been some roads transferred to Local Government Areas since 1992, 8,200 kilometres of roads on Aboriginal land, and 1,400 kilometres of park roads. (f) Included in gravel, crushed stone or other improved surface. (g) Included with Formed only.

Source: Derived mainly from Road and Traffic Authorities and local government sources in each State and Territory.

## 23.2 MOTOR VEHICLES ON REGISTER

|                            | Passenger vehicles(a) | Light commercial vehicles(b), trucks, non-freight carrying trucks, buses(c) | Total (excludes motor cycles) | Motor cycles |
|----------------------------|-----------------------|-----------------------------------------------------------------------------|-------------------------------|--------------|
| Motor vehicle census years | '000                  | '000                                                                        | '000                          | '000         |
| 1982                       | 6 233.4               | 1 617.4                                                                     | <b>7 850.8</b>                | 366.9        |
| 1985                       | 6 734.2               | 1 863.9                                                                     | <b>8 598.1</b>                | 361.6        |
| 1988                       | 7 158.8               | 1 955.2                                                                     | <b>9 114.0</b>                | 304.0        |
| 1991(d)                    | 7 860.7               | 1 953.4                                                                     | <b>9 814.1</b>                | 284.1        |
| 1993                       | 8 279.4               | 1 935.9                                                                     | <b>10 215.3</b>               | 288.8        |
| 1995                       | 8 628.8               | 2 022.1                                                                     | <b>10 650.9</b>               | 296.6        |

(a) Formerly described as motor cars and station wagons. From 1 July 1991 includes forward control passenger vehicles of less than 10 seats. (b) Combination of utilities and panel vans. From 1 July 1991 includes cab chassis vehicles 3.5 tonnes gross vehicle mass or less. (c) Formerly 'Other truck type vehicles'. (d) From 1 July 1991 some vehicles were reclassified from rigid trucks into light commercial vehicles and from buses into passenger vehicles.

Source: Motor Vehicle Census, Australia (9309.0).

## 23.3 MOTOR VEHICLE CENSUS, 31 May 1995

| 2010 - Motor Vehicle Census, 1 July - 1 July |                    |                   |        |             |                      |       |              |          |
|----------------------------------------------|--------------------|-------------------|--------|-------------|----------------------|-------|--------------|----------|
| State/Territory                              | Passenger vehicles | Light commercials | Trucks |             |                      | Buses | Motor cycles | Total(a) |
|                                              |                    |                   | Rigid  | Articulated | Non-freight carrying |       |              |          |
|                                              | '000               | '000              | '000   | '000        | '000                 | '000  | '000         | '000     |
| NSW                                          | 2 684.8            | 430.8             | 103.1  | 15.0        | 9.5                  | 13.5  | 75.8         | 3 332.5  |
| Vic.                                         | 2 315.3            | 357.8             | 84.7   | 16.5        | 11.3                 | 13.8  | 70.6         | 2 869.9  |
| Qld                                          | 1 513.3            | 340.0             | 63.6   | 11.7        | 6.7                  | 9.3   | 68.3         | 2 012.9  |
| SA                                           | 777.2              | 115.3             | 26.5   | 5.3         | 6.4                  | 3.5   | 28.6         | 962.8    |
| WA                                           | 885.5              | 187.2             | 43.0   | 6.7         | 8.6                  | 7.1   | 37.2         | 1 175.5  |
| Tas.                                         | 237.1              | 57.2              | 11.1   | 1.6         | 3.5                  | 2.1   | 7.2          | 319.9    |
| NT                                           | 58.9               | 21.5              | 2.8    | 1.1         | 0.3                  | 1.9   | 3.9          | 90.4     |
| ACT                                          | 156.6              | 17.5              | 2.7    | 0.3         | 0.8                  | 0.9   | 5.0          | 183.8    |
| Aust.                                        | 8 628.8            | 1 527.2           | 337.4  | 58.3        | 47.0                 | 52.2  | 296.6        | 10 947.5 |

(a) Excludes tractors, plant and equipment, caravans and trailers.

Source: Motor Vehicle Census, Australia (9309.0).

## 23.4 AVERAGE AGE OF VEHICLE, 31 May 1995 and 30 June 1993

| Type of vehicle             | State of registration 1995 |             |             |             |             |             |            |            | Aust. 1995  | Aust. 1993  |
|-----------------------------|----------------------------|-------------|-------------|-------------|-------------|-------------|------------|------------|-------------|-------------|
|                             | NSW                        | Vic.        | Qld         | SA          | WA          | Tas.        | NT         | ACT        |             |             |
|                             | years                      | years       | years       | years       | years       | years       | years      | years      | years       | years       |
| Passenger vehicles          | 9.4                        | 10.9        | 10.2        | 11.6        | 10.5        | 11.9        | 9.3        | 9.9        | 10.4        | 10.2        |
| Light commercial vehicles   | 10.2                       | 12.0        | 10.9        | 12.1        | 11.1        | 12.4        | 9.7        | 10.0       | 11.1        | 10.9        |
| Rigid trucks                | 12.1                       | 15.1        | 12.4        | 16.0        | 15.0        | 15.3        | 10.8       | 9.8        | 13.7        | 12.8        |
| Articulated trucks          | 10.7                       | 11.6        | 10.7        | 10.2        | 12.5        | 10.2        | 10.8       | 8.8        | 11.1        | 10.7        |
| Non-freight carrying trucks | 14.0                       | 15.4        | 13.9        | 15.1        | 17.1        | 16.3        | 14.1       | 15.5       | 15.2        | 14.3        |
| Buses                       | 8.3                        | 10.0        | 8.6         | 10.8        | 7.6         | 12.3        | 5.0        | 7.2        | 8.9         | 9.2         |
| Motor cycles                | 9.5                        | 9.8         | 10.6        | 9.3         | 10.7        | 10.3        | 8.5        | 9.6        | 10.0        | 9.4         |
| <b>Total</b>                | <b>9.6</b>                 | <b>11.2</b> | <b>10.4</b> | <b>11.8</b> | <b>10.8</b> | <b>12.1</b> | <b>9.4</b> | <b>9.9</b> | <b>10.6</b> | <b>10.4</b> |

Source: Motor Vehicle Census, Australia (Supplementary ABS statistics).

The number of registered motor vehicles (excluding motor cycles) per 1,000 of population has generally followed the same trend as the total number of motor vehicles. The figure of 606 vehicles per 1,000 of population in 1995 was the highest recorded (table 23.5).

## Registrations of new motor vehicles

Annual registrations of new vehicles processed by motor vehicle registration authorities in all States and Territories are shown in tables 23.6 and 23.7.

## 23.5 MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION

| States/Territories | Motor Vehicle Census Years |            |            |            |            |            |
|--------------------|----------------------------|------------|------------|------------|------------|------------|
|                    | 1982                       | 1985       | 1988       | 1991       | 1993       | 1995       |
| NSW                | 509                        | 529        | 524        | 525        | 529        | 545        |
| Vic.               | 531                        | 575        | 598        | 622        | 642        | 637        |
| Qld                | 591                        | 579        | 567        | 569        | 593        | 614        |
| SA                 | 559                        | 622        | 616        | 637        | 638        | 653        |
| WA                 | 582                        | 628        | 608        | 653        | 665        | 679        |
| Tas.               | 568                        | 607        | 634        | 643        | 661        | 676        |
| NT                 | 467                        | 472        | (b)389     | 507        | 497        | 520        |
| ACT                | 472                        | 499        | 511        | 556        | 591        | 604        |
| <b>Aust.</b>       | <b>540</b>                 | <b>567</b> | <b>567</b> | <b>582</b> | <b>595</b> | <b>606</b> |

(a) Excludes motor cycles, tractors, plant and equipment, caravans and trailers. (b) 1988 data understated the number of vehicles on register.

Source: *Motor Vehicle Census, Australia* (9309.0).

## 23.6 REGISTRATIONS OF NEW MOTOR VEHICLES

| Year       | Passenger vehicles(a) | Light commercial vehicles(b) | Trucks |             |                         |       | Total (excludes motor cycles) | Motor cycles |
|------------|-----------------------|------------------------------|--------|-------------|-------------------------|-------|-------------------------------|--------------|
|            |                       |                              | Rigid  | Articulated | Non-freight carrying(c) | Buses |                               |              |
| no.        | no.                   | no.                          | no.    | no.         | no.                     | no.   | no.                           | no.          |
| 1991–92(d) | 437 075               | 67 804                       | 9 924  | 1 634       | 787                     | 3 848 | <b>521 072</b>                | 16 675       |
| 1992–93    | 449 843               | 74 748                       | 9 780  | 2 199       | 708                     | 4 230 | <b>541 508</b>                | 17 513       |
| 1993–94    | 475 981               | 80 720                       | 9 812  | 3 147       | 795                     | 3 814 | <b>574 269</b>                | 17 425       |
| 1994–95    | 528 502               | 88 840                       | 11 392 | 4 815       | 867                     | 4 493 | <b>638 909</b>                | 20 505       |
| 1995–96    | 531 778               | 86 666                       | 9 726  | 2 909       | 1 074                   | 4 376 | <b>636 529</b>                | 22 345       |
| 1996–97    | 557 962               | 88 204                       | 9 470  | 3 145       | 1 099                   | 3 972 | <b>663 852</b>                | 22 842       |

(a) Formerly described as motor cars and station wagons. From 1 July 1991 includes forward control passenger vehicles of less than 10 seats. (b) Combination of utilities and panel vans. From 1 July 1991 includes cab chassis vehicles 3.5 tonnes gross vehicle mass or less. (c) Formerly 'Other truck type vehicles'. (d) From 1 July 1991 some vehicles were reclassified from rigid trucks into light commercial vehicles and from buses into passenger vehicles.

Source: *Motor Vehicle Registrations, Australia* (9304.0) and unpublished statistics.

## 23.7 REGISTRATIONS OF NEW MOTOR VEHICLES, By State/Territory — 1996–97

| State/Territory | Passenger vehicles | Light commercial vehicles(a) | Trucks       |              |                      |              | Total (excludes motor cycles) | Motor cycles  |
|-----------------|--------------------|------------------------------|--------------|--------------|----------------------|--------------|-------------------------------|---------------|
|                 |                    |                              | Rigid        | Articulated  | Non-freight carrying | Buses        |                               |               |
| no.             | no.                | no.                          | no.          | no.          | no.                  | no.          | no.                           | no.           |
| NSW             | 196 503            | 26 779                       | 3 381        | 848          | 325                  | 875          | <b>228 711</b>                | 6 763         |
| Vic.            | 140 137            | 18 188                       | 2 022        | 889          | 295                  | 729          | <b>162 260</b>                | 6 133         |
| Qld             | 100 546            | 21 416                       | 2 143        | 715          | 206                  | 938          | <b>125 964</b>                | 4 323         |
| SA              | 36 146             | 5 812                        | 431          | 316          | 136                  | 275          | <b>43 116</b>                 | 1 545         |
| WA              | 56 984             | 10 828                       | 1 128        | 255          | 90                   | 734          | <b>70 019</b>                 | 2 692         |
| Tas.            | 11 772             | 2 414                        | 172          | 74           | 35                   | 46           | <b>14 513</b>                 | 481           |
| NT              | 5 499              | 1 704                        | 139          | 39           | 8                    | 326          | <b>7 715</b>                  | 453           |
| ACT             | 10 375             | 1 063                        | 54           | 9            | 4                    | 49           | <b>11 554</b>                 | 452           |
| <b>Aust.</b>    | <b>557 962</b>     | <b>88 204</b>                | <b>9 470</b> | <b>3 145</b> | <b>1 099</b>         | <b>3 972</b> | <b>663 852</b>                | <b>22 842</b> |

(a) Combination of utilities and panel vans. Includes cab chassis vehicles 3.5 tonnes gross vehicle mass or less.

Source: *Unpublished ABS statistics on new motor vehicle registrations.*

## Use of motor vehicles

The Survey of Motor Vehicle Use has been undertaken periodically by the ABS since 1963, including every three years between 1976 and 1991, and in 1995. The following are some of the main findings from the 1995 survey.

Motor vehicles in Australia are estimated to have travelled a total of 166,514 million kilometres in the 12 months ended September 1995, a rise of 11% over the corresponding period in 1991. Of the total distance travelled, 34% was for business purposes, 24% for travel to and from work and 43% for private purposes. Passenger vehicles accounted for 74% of total distance travelled, freight carrying vehicles (including light commercial vehicles, rigid trucks and articulated

trucks) 24%, and motor cycles and buses both 1% (based on table 23.8).

The average distance travelled in the 12 months by all vehicles (including vehicles which reported zero distance travelled) was 15,200 km, an increase of about 2% over the 12 months ended September 1991. Table 23.9 shows the average kilometres travelled by different types of vehicle, and where they travelled.

Load carrying vehicles performed 119,227 million tonne-kilometres (table 23.10), with vehicles registered in New South Wales, Victoria and Queensland accounting for about 70% of the total (27,713 million, 30,571 million and 25,666 million tonne-kilometres, respectively).

**23.8 TOTAL KILOMETRES TRAVELLED, Year Ended 30 September 1995**

| Type of vehicle           | Business      |              |               |                        |               | Purpose        |
|---------------------------|---------------|--------------|---------------|------------------------|---------------|----------------|
|                           | Laden         | Unladen      | Total         | Total to and from work | Private       | Total          |
|                           |               |              |               |                        |               |                |
|                           | mill. km      | mill. km     | mill. km      | mill. km               | mill. km      | mill. km       |
| Passenger vehicles        | ..            | ..           | 26 116        | 33 158                 | 64 417        | 123 691        |
| Motor cycles              | ..            | ..           | 177           | 579                    | 769           | 1 526          |
| Light commercial vehicles | 11 558        | 4 342        | (a)16 918     | 5 190                  | 5 642         | 27 751         |
| Rigid trucks              | 4 740         | 1 650        | 6 391         | 209                    | 125           | 6 725          |
| Articulated trucks        | 3 778         | 1 285        | 5 063         | 24                     | 7             | 5 094          |
| Other truck types         | ..            | ..           | 241           | 3                      | 5             | 249            |
| Buses                     | ..            | ..           | 1 406         | 24                     | 49            | 1 479          |
| <b>Total</b>              | <b>20 076</b> | <b>7 277</b> | <b>56 312</b> | <b>39 188</b>          | <b>71 015</b> | <b>166 514</b> |

(a) Includes total business travel for some light commercial vehicles where the laden and unladen business kilometres could not be obtained.

Source: Survey of Motor Vehicle Use, Australia, Preliminary (9202.0).

**23.9 AVERAGE KILOMETRES TRAVELLED(a), Year Ended 30 September 1995**

| Type of vehicle            | Area of operation(b) |                  |                                   |                                    |            |             |
|----------------------------|----------------------|------------------|-----------------------------------|------------------------------------|------------|-------------|
|                            | Capital city(c)      | Provincial urban | Other areas of State or Territory | Total within State of registration | Interstate | Australia   |
|                            |                      |                  |                                   |                                    |            |             |
|                            | '000 km              | '000 km          | '000 km                           | '000 km                            | '000 km    | '000 km     |
| Passenger vehicles         | 10.7                 | 6.6              | 6.7                               | 14.1                               | 3.7        | 14.7        |
| Motor cycles               | 5.1                  | 2.7              | 3.1                               | 5.2                                | 2.9        | 5.4         |
| Light commercial vehicles  | 14.7                 | 11.1             | 11.7                              | 17.4                               | 5.8        | 18.0        |
| Rigid trucks               | 21.5                 | 14.8             | 12.1                              | 19.9                               | 10.6       | 20.5        |
| Articulated trucks         | 30.6                 | 24.2             | 52.3                              | 67.0                               | 70.9       | 89.9        |
| Non-freight carrying types | 21.4                 | 11.6             | 8.6                               | 16.0                               | 5.1        | 16.1        |
| Buses                      | 26.4                 | 14.6             | 21.3                              | 30.9                               | 16.9       | 32.8        |
| <b>Total</b>               | <b>11.4</b>          | <b>7.3</b>       | <b>8.0</b>                        | <b>14.9</b>                        | <b>4.9</b> | <b>15.6</b> |

(a) As this table relates to actual vehicle usage, vehicles which travelled zero distance are excluded from the calculation of averages. (b) Includes the average distance travelled by all vehicles registered in a State/Territory within the specified area.

(c) Includes all of the ACT in Capital City and all of the NT in other areas of State or Territory.

Source: Survey of Motor Vehicle Use, Australia, Preliminary (9202.0).

**23.10 TOTAL TONNE-KILOMETRES(a), Year Ended 30 September 1995**

| Type of vehicle           | State of registration |               |               |               |               |              |              |            |                |
|---------------------------|-----------------------|---------------|---------------|---------------|---------------|--------------|--------------|------------|----------------|
|                           | NSW                   | Vic.          | Qld           | SA            | WA            | Tas.         | NT           | ACT        | Aust.          |
|                           | mill. t-km            | mill. t-km    | mill. t-km    | mill. t-km    | mill. t-km    | mill. t-km   | mill. t-km   | mill. t-km | mill. t-km     |
| Light commercial vehicles | 1 217                 | 1 202         | 1 246         | 330           | 582           | 105          | 43           | 74         | 4 799          |
| Rigid trucks              | 7 737                 | 5 599         | 5 291         | 1 749         | 3 473         | 630          | 305          | 259        | 25 044         |
| Articulated trucks        | 18 758                | 23 770        | 19 129        | 10 362        | 11 201        | 2 081        | 3 583        | 500        | 89 384         |
| <b>Total</b>              | <b>27 713</b>         | <b>30 571</b> | <b>25 666</b> | <b>12 442</b> | <b>15 256</b> | <b>2 816</b> | <b>3 932</b> | <b>833</b> | <b>119 227</b> |

(a) Total tonne-kilometres is the product of reported average load and total business kilometres travelled while laden.

Source: *Survey of Motor Vehicle Use, Australia, Preliminary (9202.0)*.

**Drivers' and riders' licences**

Table 23.11 shows the number of licences for motor vehicle drivers and motor cycle riders as at 30 June 1996 and 1997.

**23.11 DRIVERS' AND RIDERS' LICENCES**

|                     | NSW              | Vic.             | Qld(a)              | SA               | WA               | Tas.           | NT             | ACT            |
|---------------------|------------------|------------------|---------------------|------------------|------------------|----------------|----------------|----------------|
| Type of licence     | no.              | no.              | no.                 | no.              | no.              | no.            | no.            | no.            |
| <b>30 JUNE 1996</b> |                  |                  |                     |                  |                  |                |                |                |
| Motor vehicle       | 3 861 662        | 2 928 250        | n.a.                | 829 094          | n.a.             | 267 448        | 80 023         | 185 201        |
| Motor cycle         | 354 550          | 186 154          | (b)341 357          | 15 351           | n.a.             | 158            | 87             | 137            |
| Combined            | (b)351 096       | —                | 2 056 996           | 134 053          | —                | 28 729         | 19 634         | 21 804         |
| <b>Total</b>        | <b>4 216 212</b> | <b>3 114 404</b> | <b>(c)2 056 996</b> | <b>978 498</b>   | <b>1 154 165</b> | <b>296 335</b> | <b>99 744</b>  | <b>207 142</b> |
| <b>30 JUNE 1997</b> |                  |                  |                     |                  |                  |                |                |                |
| Motor vehicle       | 3 950 855        | 2 975 654        | n.a.                | 847 237          | n.a.             | n.a.           | 80 810         | n.a.           |
| Motor cycle         | 368 749          | 193 862          | n.a.                | 1 600            | n.a.             | n.a.           | 105            | n.a.           |
| Combined            | (b)365 799       | —                | n.a.                | 152 909          | —                | n.a.           | 19 864         | n.a.           |
| <b>Total</b>        | <b>4 319 604</b> | <b>3 169 516</b> | n.a.                | <b>1 001 746</b> | n.a.             | n.a.           | <b>100 779</b> | n.a.           |

(a) Queensland figures for 1996 are as at 2 April 1996. (b) Not included in the total. (c) The difference between Total and Combined licences is Motor cycle licences only.

Source: *Motor Registry in each State and Territory*.

## Road traffic accidents

The number of persons killed in Australia as a result of road traffic accidents fell between 1990 and 1994. The large rise in 1995 was followed by

a small decline in 1996. Large falls in New South Wales and Queensland were partly offset by a substantial increase in Western Australia and small rises in Tasmania and the Territories.

### 23.12 ROAD TRAFFIC ACCIDENTS INVOLVING FATALITIES

|                                | NSW | Vic. | Qld | SA  | WA  | Tas. | NT  | ACT | Aust. |
|--------------------------------|-----|------|-----|-----|-----|------|-----|-----|-------|
| Year                           | no. | no.  | no. | no. | no. | no.  | no. | no. | no.   |
| ACCIDENTS INVOLVING FATALITIES |     |      |     |     |     |      |     |     |       |
| 1991                           | 585 | 435  | 362 | 166 | 187 | 65   | 60  | 16  | 1 876 |
| 1992                           | 578 | 365  | 364 | 142 | 171 | 56   | 42  | 18  | 1 734 |
| 1993                           | 518 | 381  | 357 | 191 | 190 | 47   | 40  | 11  | 1 735 |
| 1994                           | 557 | 346  | 367 | 145 | 195 | 51   | 36  | 15  | 1 712 |
| 1995                           | 563 | 371  | 408 | 163 | 194 | 53   | 56  | 14  | 1 822 |
| 1996                           | 544 | 383  | 338 | 162 | 220 | 53   | 58  | 17  | 1 775 |
| PERSONS KILLED                 |     |      |     |     |     |      |     |     |       |
| 1991                           | 663 | 503  | 395 | 184 | 207 | 75   | 67  | 17  | 2 113 |
| 1992                           | 649 | 396  | 416 | 165 | 200 | 74   | 54  | 20  | 1 974 |
| 1993                           | 581 | 435  | 396 | 218 | 209 | 58   | 44  | 12  | 1 953 |
| 1994                           | 647 | 378  | 422 | 159 | 211 | 59   | 41  | 17  | 1 934 |
| 1995                           | 620 | 418  | 456 | 181 | 209 | 57   | 61  | 15  | 2 017 |
| 1996                           | 587 | 418  | 385 | 181 | 247 | 64   | 72  | 23  | 1 977 |

Source: Federal Office of Road Safety, *Road Fatalities Australia*, 1996.

### 23.13 ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a), 1995

| State/Territory | Persons killed | Persons injured | Per 100,000 of population(b) |                 | Per 10,000 motor vehicles registered(c) |                 |
|-----------------|----------------|-----------------|------------------------------|-----------------|-----------------------------------------|-----------------|
|                 |                |                 | Persons killed               | Persons injured | Persons killed                          | Persons injured |
|                 | no.            | no.             | no.                          | no.             | no.                                     | no.             |
| NSW             | 620            | 6 127           | 10.1                         | 100.2           | 1.9                                     | 18.5            |
| Vic.            | 418            | 6 124           | 9.3                          | 136.0           | 1.5                                     | 21.4            |
| Qld             | 456            | 4 605           | 13.9                         | 140.5           | 2.2                                     | 22.6            |
| SA              | 181            | 1 521           | 12.3                         | 103.2           | 1.9                                     | 16.3            |
| WA              | 209            | 2 890           | 12.1                         | 166.9           | 1.8                                     | 24.5            |
| Tas.            | 57             | 528             | 12.1                         | 111.6           | 1.8                                     | 16.5            |
| NT              | 61             | 401             | 35.1                         | 230.6           | 6.3                                     | 41.6            |
| ACT             | 15             | 172             | 4.9                          | 56.6            | 0.8                                     | 9.4             |
| <b>Aust.</b>    | <b>2 017</b>   | <b>22 368</b>   | <b>11.1</b>                  | <b>123.9</b>    | <b>1.8</b>                              | <b>20.5</b>     |

(a) Accidents reported to the police or other relevant authority which occurred in public thoroughfares and which resulted in death within thirty days or personal injury to the extent that the injured person was admitted to hospital. (b) Estimated resident population at 30 June 1995. (c) Number of motor vehicles (excluding tractors, plant and equipment) on register at 30 June 1995.

Source: Federal Office of Road Safety, *Road Injury Australia*, 1995.

## Rail transport

### Government railways

The government owned railway systems are operated by:

- in NSW, as of 1 July 1996: State Rail (passenger), FreightCorp (intrastate freight), Rail Access Corporation (track access) and Railway Services Authority (track construction and maintenance);
- in Victoria, as of 1 July 1997: Public Transport Corporation (passenger), V/Line Freight Corporation (intrastate freight) and Victorian Rail Track Corporation (track access);
- Queensland Rail;
- Westrail;
- TransAdelaide;
- National Rail Corporation Ltd; and
- Australian National; as of December 1997: Track Access Unit.

The government rail systems include routes in more than one State, and the Victorian system extends into New South Wales. Therefore the system route-kilometres shown in table 23.14 do not represent route-kilometres exclusively within each State and Territory.

The National Rail Corporation was incorporated as a commercial operating company in September 1991 with a charter to take over all interstate rail freight business and related functions and assets from government-owned railways. This transfer occurred over a three-year transition period ending on 31 January 1996. Its shareholders are the Commonwealth Government, and the Governments of New South Wales and Victoria. Commercial operations began on 5 April 1993.

**23.14 GOVERNMENT RAILWAYS, Route-Kilometres Operated**

|         | NSW    | Vic.  | Qld    | SA(a) | WA    | Australian National | Australia      |
|---------|--------|-------|--------|-------|-------|---------------------|----------------|
| 30 June | km     | km    | km     | km    | km    | km                  | km             |
| 1991    | r7 451 | 5 179 | 10 015 | 125   | 5 554 | 6 612               | <b>r34 936</b> |
| 1992    | r7 451 | 5 179 | 10 011 | 120   | 5 554 | 6 559               | <b>r34 927</b> |
| 1993    | r7 451 | 5 107 | 9 797  | 120   | 5 583 | 6 235               | <b>r34 293</b> |
| 1994    | r7 451 | 5 107 | 9 357  | 120   | 5 583 | 6 235               | <b>r33 853</b> |
| 1995    | r7 451 | 4 917 | 9 452  | r120  | 5 583 | 6 152               | <b>r33 675</b> |
| 1996    | 7 451  | 4 872 | 9 442  | 120   | 5 369 | 6 118               | <b>33 372</b>  |

(a) Suburban only. Country routes were transferred to Australian National in 1978.

Source: *Australasian Railway Association Inc.*

**23.15 GOVERNMENT RAILWAYS, Passenger Journeys(a)**

|            | NSW     | Vic.    | Qld    | SA    | WA        | Australian National | Australia      |
|------------|---------|---------|--------|-------|-----------|---------------------|----------------|
|            | '000    | '000    | '000   | '000  | '000      | '000                | '000           |
| 1994–95    |         |         |        |       |           |                     |                |
| Suburban   | 250 000 | 105 360 | 37 026 | 8 400 | (b)23 500 | —                   | <b>424 286</b> |
| Country(c) | 2 200   | 6 390   | 895    | —     | 247       | 191                 | <b>9 923</b>   |
| 1995–96    |         |         |        |       |           |                     |                |
| Suburban   | 256 400 | 109 240 | 39 187 | 8 273 | (b)23 007 | —                   | <b>436 107</b> |
| Country(c) | 2 400   | 7 016   | 881    | —     | 279       | 244                 | <b>10 820</b>  |

(a) Based on ticket sales making allowances for periodical tickets. (b) Journeys made on the Transperth system may involve more than one mode (bus, train, ferry) and passengers are able to transfer within a mode or between modes. Therefore, patronage by mode is estimated in terms of passenger boardings. (c) Inter-system traffic is included in the total for each system over which it passes.

Source: *Various rail authorities, the Rail Industry Council and the Australian Bureau of Statistics.*

Australian National's rail operating businesses were sold to three consortia. SA Freight (AN's South Australian freight operations) is being sold to a consortium led by American shortline operator Genesee and Wyoming Railroad (with Bankers Trust and Australian companies Transfield Maintenance and Evans Deakin Industries). Tasrail (AN's Tasmanian operations) is being sold to the Australian Transport Network, a consortium of Wisconsin Central (a US regional railway based in Wisconsin), Tanz Rail (NZ railways), Fay Richwhite and Berkshire Partners (merchant bankers). AN Passenger (operating "The Ghan", the "Indian Pacific" and "The Overland") is being sold to the Great Southern Railway (Macquarie Bank with British rail operators GB Railways and Serco).

Tables 23.15 and 23.16 show information on aspects of the performance of the government railways. The information relating to passenger journeys, freight-tonnes carried and freight tonne-kilometres refers only to operations for which revenue was received.

### Non-government railways

Statistics shown in table 23.17 relate to non-government railways with a route distance exceeding two kilometres and which operate outside industrial estates, harbour precincts, mines and quarries.

**23.16 GOVERNMENT RAILWAYS**

| Year                         | NSW        | Vic.       | Qld        | WA      | Australian National | National Rail | Australia         |
|------------------------------|------------|------------|------------|---------|---------------------|---------------|-------------------|
| FREIGHT CARRIED ('000 t)     |            |            |            |         |                     |               |                   |
| 1990-91                      | 58 266     | 9 659      | 82 965     | 24 410  | 13 189              | n.a.          | <b>188 489</b>    |
| 1991-92                      | 57 341     | 8 492      | 90 658     | 25 890  | 13 083              | n.a.          | <b>195 464</b>    |
| 1992-93                      | 61 597     | 9 646      | 90 303     | 26 523  | 13 899              | 1 200         | <b>203 168</b>    |
| 1993-94                      | 65 500     | 7 579      | 92 092     | 27 726  | 14 942              | 8 800         | <b>216 639</b>    |
| 1994-95                      | 65 200     | (a)5 716   | 96 807     | 29 317  | (b)7 846            | 10 100        | <b>214 986</b>    |
| 1995-96                      | 63 800     | 6 877      | 96 120     | 31 081  | 7 905               | 9 941         | <b>215 724</b>    |
| NET TONNE-KILOMETRES (mill.) |            |            |            |         |                     |               |                   |
| 1990-91                      | 14 222     | 3 700      | r22 620    | 4 583   | 7 789               | n.a.          | <b>r52 914</b>    |
| 1991-92                      | 13 811     | 2 704      | r24 461    | 4 878   | 7 799               | n.a.          | <b>r54 198</b>    |
| 1992-93                      | r14 837    | 3 678      | r24 391    | 4 970   | 8 480               | n.a.          | <b>r56 356</b>    |
| 1993-94                      | r16 203    | 4 212      | r25 011    | 5 447   | 9 159               | r13 916       | <b>r60 032</b>    |
| 1994-95                      | r9 000     | (a)1 790   | r26 492    | 6 235   | (b)1 500            | r16 600       | <b>r61 617</b>    |
| 1995-96                      | 10 067     | 1 970      | 26 368     | 6 804   | 1 379               | 16 900        | <b>63 488</b>     |
| FREIGHT EARNINGS (\$'000)    |            |            |            |         |                     |               |                   |
| 1990-91                      | 783 602    | 164 175    | 1 124 800  | 235 420 | 275 294             | n.a.          | <b>2 583 291</b>  |
| 1991-92                      | 789 236    | 135 393    | r1 138 000 | 254 617 | r266 363            | n.a.          | <b>r2 583 609</b> |
| 1992-93                      | 815 336    | 151 311    | r1 175 000 | 248 314 | r274 663            | 60 800        | <b>r2 725 424</b> |
| 1993-94                      | (c)688 796 | 158 747    | r1 196 000 | 269 494 | r272 656            | 443 408       | <b>r3 029 101</b> |
| 1994-95                      | 637 438    | (a)111 243 | r1 242 000 | 277 361 | (b)r74 893          | 479 677       | <b>r2 822 612</b> |
| 1995-96                      | 810 500    | 121 210    | 1 297 000  | 254 704 | 73 578              | 475 747       | <b>3 032 739</b>  |

(a) The substantial falls in Victoria are attributed to the effects of the drought on the haulage of grain. (b) The substantial falls by Australian National are attributed to National Rail's new role as an interstate freight carrier. (c) In 1993-94 and subsequent years the revenue from the National Rail Corporation is included in Intersystem Recoveries. Prior to 1993-94 this revenue was included in freight revenue.

Source: Various rail authorities and the Rail Industry Council.



**23.17 ACTIVITIES OF NON-GOVERNMENT RAILWAYS**

| Year                     | Iron ore railways | Sugar tramways | Coal railways(a) | Other non-government railways | Total(a) |
|--------------------------|-------------------|----------------|------------------|-------------------------------|----------|
| TONNES CARRIED (mill.)   |                   |                |                  |                               |          |
| 1991–92                  | 111.1             | 18.6           | 9.3              | 12.0                          | 150.8    |
| 1992–93                  | 112.9             | 26.0           | 8.5              | 11.8                          | 159.2    |
| 1993–94                  | 117.5             | 29.3           | 8.7              | 11.5                          | 167.0    |
| 1994–95                  | 121.6             | 31.8           | 7.9              | 12.1                          | 173.4    |
| 1995–96                  | r129.3            | r34.5          | r8.0             | r11.8                         | r183.6   |
| 1996–97                  | 132.9             | 35.8           | 8.5              | 15.1                          | 192.3    |
| TONNE-KILOMETRES (mill.) |                   |                |                  |                               |          |
| 1991–92                  | 34 362            | 334            | 123              | 259                           | 35 078   |
| 1992–93                  | 34 929            | 468            | 117              | 253                           | 35 767   |
| 1993–94                  | 36 849            | 527            | 123              | 248                           | 37 747   |
| 1994–95                  | 37 177            | 572            | 111              | 250                           | 38 110   |
| 1995–96                  | r39 849           | 620            | r110             | r244                          | r40 823  |
| 1996–97                  | 40 930            | 644            | 112              | 308                           | 41 994   |

(a) Includes transfers to and from government railways.

Source: Bureau of Transport and Communications Economics, Transport Indicators Unit.

## Water transport

### The Australian fleet

New South Wales and Queensland between them account for 58% of ships registered in Australia. The majority of these ships are used for non-commercial purposes (based on table 23.18).

Of the 71 ships which comprise the major Australian trading fleet (2,000 dead weight

tonnes and over), 61% operated on coastal routes (based on table 23.19).

### Coastal shipping cargo

Table 23.20 shows the gross weight of shipping cargo loaded at an Australian port for discharge at another Australian port. Both interstate and intrastate cargo movements are included. Cargo loaded or to be discharged at an overseas port is excluded.

**23.18 SHIPS REGISTERED(a) IN AUSTRALIA, 30 June 1995**

| Location           | Nature of registration |         |            |                     |          | Total |
|--------------------|------------------------|---------|------------|---------------------|----------|-------|
|                    | Recreational           | Fishing | Government | Demise chartered(b) | Other(c) |       |
|                    | no.                    | no.     | no.        | no.                 | no.      | no.   |
| New South Wales    | 1 537                  | 277     | 4          | 8                   | 230      | 2 056 |
| Victoria           | 537                    | 197     | —          | 3                   | 118      | 855   |
| Queensland         | 1 289                  | 667     | 26         | 3                   | 356      | 2 341 |
| South Australia    | 244                    | 279     | 1          | —                   | 39       | 563   |
| Western Australia  | 518                    | 405     | 1          | 1                   | 122      | 1 047 |
| Tasmania           | 200                    | 217     | 4          | 1                   | 54       | 476   |
| Northern Territory | 218                    | 52      | 1          | —                   | 23       | 294   |
| Australia          | 4 543                  | 2 094   | 37         | 16                  | 942      | 7 632 |

(a) Any Australian ship longer than 24 metres must be registered. Any Australian ships travelling overseas must be registered regardless of length. A ship less than 24 metres may be registered, but this is not required by law. (b) A demise chartered ship is a foreign owned ship chartered by way of a charter party to an Australian based operator, who is an Australian national and who under the charter party has whole possession and control of the ship, including the right to appoint the master and crew of the ship.

(c) Relates to vessels used for commercial purposes.

Source: Department of Transport and Regional Development.

**23.19 SUMMARY OF THE AUSTRALIAN TRADING FLEET OF SHIPS 150 GROSS TONNES OR MORE,  
30 June 1996**

| Ships                            | Number    | DWT(a)           | Gross tonnes     |
|----------------------------------|-----------|------------------|------------------|
| <b>Major Australian fleet(b)</b> |           |                  |                  |
| Coastal                          |           |                  |                  |
| Australian registered            | 38        | 1 277 231        | 828 596          |
| Overseas registered              | 4         | 22 665           | 25 259           |
| Total coastal fleet              | 42        | 1 299 896        | 853 855          |
| Overseas                         |           |                  |                  |
| Australian registered            | 23        | 1 968 784        | 1 384 892        |
| Overseas registered              | 2         | 27 490           | 22 241           |
| Total overseas fleet             | 25        | 1 996 274        | 1 407 133        |
| Major Australian fleet           | 67        | 3 296 170        | 2 260 988        |
| Other trading ships              |           |                  |                  |
| Australian registered            | 14        | 5 404            | 5 564            |
| Overseas registered              | 1         | 1 720            | 1 167            |
| <b>Australian trading fleet</b>  | <b>82</b> | <b>3 303 294</b> | <b>2 267 719</b> |

(a) Dead weight tonnage. (b) 2,000 DWT and over.

Source: Department of Transport and Regional Development.

**23.20 COASTAL CARGO LOADED AND DISCHARGED, Gross Weight — 1994-95**

| Loaded                 |               | Discharged    |                    | Loaded |        | Discharged |  |
|------------------------|---------------|---------------|--------------------|--------|--------|------------|--|
| Port                   | '000 t        | '000 t        | Port               | '000 t | '000 t |            |  |
| New South Wales        |               |               | South Australia    |        |        |            |  |
| Sydney                 | 56            | 2 432         | Adelaide           | 785    | 1 772  |            |  |
| Botany Bay             | 756           | 3 765         | Port Stanvac       | 691    | 230    |            |  |
| Newcastle              | 338           | 5 157         | Other              | 5 640  | 1 381  |            |  |
| Port Kembla            | 2 603         | 7 742         | Total              | 7 117  | 3 384  |            |  |
| Other                  | 1 205         | 100           | Western Australia  |        |        |            |  |
| Total                  | 4 957         | 19 196        | Fremantle          | 1 874  | 1 546  |            |  |
| Victoria               |               |               | Other              | 9 406  | 1 208  |            |  |
| Melbourne              | 1 859         | 3 471         | Total              | 11 280 | 2 753  |            |  |
| Geelong                | 1 219         | 971           | Tasmania           |        |        |            |  |
| Hastings               | 5 248         | 917           | Hobart             | 560    | 968    |            |  |
| Other                  | 33            | 653           | Burnie             | 1 016  | 705    |            |  |
| Total                  | 8 360         | 6 011         | Devonport          | 1 061  | 603    |            |  |
| Queensland             |               |               | Launceston         | 312    | 1 266  |            |  |
| Brisbane               | 1 830         | 4 188         | Other              | 1 250  | 57     |            |  |
| Gladstone              | 1 418         | 8 718         | Total              | 4 200  | 3 599  |            |  |
| Other                  | 9 307         | 2 287         | Northern Territory |        |        |            |  |
| Total                  | 12 555        | 15 193        | Darwin             | 79     | 259    |            |  |
|                        |               |               | Other              | 642    | 71     |            |  |
|                        |               |               | Total              | 721    | 330    |            |  |
| <b>Total all ports</b> | <b>49 190</b> | <b>50 466</b> |                    |        |        |            |  |

Source: Department of Transport and Regional Development.

## Air transport

### International activity

#### International scheduled passenger service operators

At 31 December 1996, 54 international airlines were operating regular scheduled passenger air services to and from Australia. The carriers and contracting states are shown in the following table.

Air France and Lufthansa withdrew from Australia in late 1995, while AOM French Airlines, Asiana Airlines, Egypt Air and Kiwi Travel International Airlines began services after 30 June 1995. Vietnam Airlines commenced scheduled operations in early 1996.

Air Zimbabwe, American Airlines and Canadian Airlines International (CAI) operate to and from Australia through a code-share arrangement with Qantas. Virgin Atlantic Airways serves Australia through a code-share arrangement with Malaysia Airlines.

Qantas operates international and domestic flights. See the *Domestic activity* section for details of the Qantas fleet. British Airways purchased 25% of Qantas Airways Limited on 10 March 1993. The company was floated on the Australian Stock Exchange on 22 June 1995.

Ansett Australia operated its first international flight in its own right on 11 September 1993.

#### International non-scheduled services

Passenger and freight charter policies in Australia encourage in-bound tourism and freight carriage by non-scheduled services, particularly over routes not served by the scheduled carriers. Over recent years there has been a significant increase in the passenger charter market, with airlines from the United Kingdom and New Zealand operating services during the summer period.

#### International traffic

Particulars of scheduled international airline traffic to and from Australia during 1996 are shown in table 23.21. Note that 'Australia' includes Norfolk Island. These figures do not include traffic between Norfolk Island and other parts of Australia. Statistics relating to the operations of Australia's regular overseas services include all stages of Qantas, Ansett and National Jet flights linking Australia with overseas countries. Table 23.22 shows freight tonnes carried between overseas and Australian cities (city pairs). Table 23.23 shows the number of airline passengers (passenger traffic) passing through Australia's international airports.

**23.21 SCHEDULED INTERNATIONAL AIRLINE TRAFFIC TO AND FROM AUSTRALIA(a), Year ended December 1996**

| Type of traffic               | Flights(b)(c)<br>no. | Passengers<br>no. | Freight<br>tonnes | Mail<br>tonnes |
|-------------------------------|----------------------|-------------------|-------------------|----------------|
| <b>Traffic to Australia</b>   |                      |                   |                   |                |
| Qantas Airways Limited        | 11 700               | 2 594 120         | 81 404            | 3 211          |
| Ansett Australia              | 1 443                | 257 444           | 6 146             | 757            |
| National Jet Systems          | 4 609                | 4 609             | 41                | —              |
| Other airlines                | 22 874               | 3 857 864         | 179 171           | 7 848          |
| <b>All airlines</b>           | <b>36 214</b>        | <b>6 714 037</b>  | <b>266 761</b>    | <b>11 817</b>  |
| <b>Traffic from Australia</b> |                      |                   |                   |                |
| Qantas Airways Limited        | 11 656               | 2 560 138         | 98 819            | 5 942          |
| Ansett Australia              | 1 448                | 252 133           | 10 030            | 47             |
| National Jet Systems          | 197                  | 5 035             | 1                 | —              |
| Other airlines                | 22 428               | 3 771 159         | 209 866           | 2 432          |
| <b>All airlines</b>           | <b>35 729</b>        | <b>6 588 465</b>  | <b>318 726</b>    | <b>8 421</b>   |

(a) Australia and Norfolk Island. (b) Includes Qantas flights using aircraft leased from other airlines and vice versa. (c) The difference between in/out numbers arises because some outward flights are operated as non-scheduled, and thus not counted in the above table.

Source: Department of Transport and Regional Development.

## 23.22 FREIGHT CARRIED BY CITY PAIRS

|                       | 1993-94        | 1994-95        | 1995-96        |
|-----------------------|----------------|----------------|----------------|
|                       | tonnes         | tonnes         | tonnes         |
| Auckland/Sydney       | 39 250         | 44 541         | 42 210         |
| Los Angeles/Sydney    | 29 765         | 33 686         | 36 249         |
| Singapore/Sydney      | 30 794         | 32 730         | 35 808         |
| Hong Kong/Sydney      | 24 343         | 31 882         | 33 735         |
| Singapore/Melbourne   | 23 319         | 28 571         | 29 297         |
| Hong Kong/Melbourne   | 19 466         | 27 499         | 28 239         |
| Tokyo/Sydney          | 23 502         | 23 176         | 23 069         |
| Auckland/Melbourne    | 22 293         | 22 742         | 21 385         |
| Singapore/Perth       | 17 918         | 19 065         | 20 799         |
| Auckland/Brisbane     | 11 078         | 11 299         | 12 598         |
| Other City Pairs      | 234 609        | 269 256        | 302 100        |
| <b>All City Pairs</b> | <b>476 336</b> | <b>544 448</b> | <b>585 487</b> |

Source: Department of Transport and Regional Development.

## 23.23 PASSENGER TRAFFIC THROUGH AUSTRALIAN INTERNATIONAL AIRPORTS

|                     | 1994              | 1995              | 1996              |
|---------------------|-------------------|-------------------|-------------------|
| Airport             | no. of passengers | no. of passengers | no. of passengers |
| Sydney              | 5 358 494         | 5 861 918         | 6 513 802         |
| Melbourne           | 1 871 508         | 2 011 154         | 2 192 857         |
| Brisbane            | 1 686 057         | 1 965 327         | 2 192 041         |
| Perth               | 1 121 046         | 1 190 837         | 1 292 125         |
| Cairns              | 679 275           | 658 397           | 719 336           |
| Adelaide            | 214 356           | 207 621           | 205 798           |
| Darwin              | 131 981           | 139 637           | 147 793           |
| Christmas Island(a) | 20 668            | 27 479            | 14 513            |
| Norfolk Island      | 15 906            | 15 767            | 14 797            |
| Hobart              | 7 976             | 7 362             | 5 103             |
| Broome(b)           | —                 | —                 | 2 338             |
| Port Hedland        | 2 302             | 1 267             | 1 536             |
| Coolangatta(c)      | —                 | —                 | 0 463             |
| Townsville(d)       | 4 031             | —                 | —                 |
| <b>Total</b>        | <b>11 113 600</b> | <b>12 086 675</b> | <b>13 302 502</b> |

(a) International operations commenced November 1993. (b) International operations commenced January 1996. (c) International operations commenced December 1996. (d) International operations ceased March 1991, recommenced November 1992 and ceased again in October 1994.

Source: Department of Transport and Regional Development.

## Domestic activity

The Commonwealth Government deregulated domestic aviation in Australia and opened the nation's interstate air services to free competition from 31 October 1990.

### Major domestic airlines as at 30 June 1995

The Ansett group's fleet consisted of 75 aircraft, including two Boeing 747, six Boeing 767, 21 Boeing 737, five Boeing 727, 12 A320-200 Airbus and 12 British Aerospace 146 jet aircraft. Regional airlines in the Ansett Group are Kendell Airlines, Aeropelican and Skywest Airlines.

Qantas operated a fleet of 31 Boeing 747, 22 Boeing 767, 35 Boeing 737, four A300 Airbus and eight British Aerospace 146 jet aircraft. Regional airlines in the Qantas Group are Eastern Australia Airlines, Southern Australia Airlines, Sunstate Airlines and Airlink. The Qantas Group operated 38 aircraft, the largest regional fleet in Australia.

### Regional operators

At 30 June 1997, 35 regional operators provided regular public transport air services to around 200 ports in Australia.

In numerical terms the aircraft used by regional operators are predominantly in the six to nine seats category, such as the Piper PA31 and Cessna 310, 402 and 404 series. However, an increasing number of larger types are in use. These include the DeHavilland Canada Dash 8 and SAAB 340 which are in the 34–36 seats category. Jet aircraft are also utilised by some regional airlines. In total these larger turbo-prop and jet aircraft carry the majority of airline passengers. During 1996–97, regional operators carried an estimated 3.8 million passengers.

### Scheduled domestic services

Statistics on all major domestic airline services and the number of domestic airline passengers

passing through airports are shown in tables 23.24 and 23.25.

### Other aviation matters

In addition to scheduled services, a wide range of other activities is undertaken by the aviation industry, including business flying, aerial agriculture, charter, training and private flying. Charter operations and training have, in recent years, made up almost 50% of general aviation hours flown. Charter operations involve the use of aircraft in non-scheduled operations for the carriage of passengers and cargo for hire or reward.

**23.24 DOMESTIC AIRLINE ACTIVITY**

|                                | Unit   | 1991–92    | 1992–93    | 1993–94    | 1994–95    | 1995–96    |
|--------------------------------|--------|------------|------------|------------|------------|------------|
| <b>Domestic airlines</b>       |        |            |            |            |            |            |
| Hours flown                    | —      | 336 650    | 356 534    | 373 541    | 424 991    | 450 605    |
| Aircraft departures            | —      | 427 028    | 448 762    | 453 342    | 500 882    | 514 078    |
| Total revenue passengers(a)    | —      | 18 476 192 | 18 577 797 | 19 997 339 | 22 113 903 | 23 405 977 |
| Cargo on board(b)              | tonnes | 137 903    | 144 117    | 153 565    | 168 627    | 170 780    |
| Passenger kilometres performed | '000   | 19 059 930 | 18 997 047 | 21 114 482 | 23 694 641 | 25 523 451 |
| Cargo tonne kilometres(b)      | '000   | 156 026    | 170 929    | 186 771    | 205 707    | 205 779    |
| Total tonne kilometres         | '000   | 1 871 420  | 1 880 663  | 2 087 074  | 2 338 224  | 2 502 889  |
| Seat kilometres available      | '000   | 24 309 766 | 24 771 629 | 27 364 680 | 31 692 945 | 34 445 955 |
| Revenue passenger load factor  | %      | 78.4       | 76.7       | 77.2       | 74.8       | 74.1       |
| Revenue weight load factor     | %      | 61.3       | 60.2       | 61.6       | 59.6       | 58.3       |
| <b>Regional airlines</b>       |        |            |            |            |            |            |
| Total revenue passengers(a)    | —      | 2 520 838  | 2 897 888  | 3 330 030  | 3 608 998  | 3 960 513  |
| Cargo on board(b)              | tonnes | 3 035      | 2 781      | 2 887      | 2 736      | 2 760      |
| Cargo tonnes(b)                | —      | 2 638      | 2 364      | 2 494      | 2 451      | 2 473      |

(a) The unit of measurement is traffic on board (which includes transit traffic). (b) Includes freight and mail.

Source: Department of Transport and Regional Development.

**23.25 SCHEDULED PASSENGER UPLIFTS AND DISCHARGES BY MAJOR DOMESTIC AIRLINES AT PRINCIPAL AIRPORTS(a)**

|             | 1990–91   | 1991–92   | 1992–93    | 1993–94    | 1994–95     | 1995–96    |
|-------------|-----------|-----------|------------|------------|-------------|------------|
|             | no.       | no.       | no.        | no.        | no.         | no.        |
| Sydney      | 7 634 518 | 9 994 443 | 10 042 288 | 10 657 301 | r11 700 902 | 12 435 495 |
| Melbourne   | 6 419 173 | 8 148 589 | 8 111 724  | 8 632 378  | r9 627 752  | 10 415 665 |
| Brisbane    | 3 915 302 | 5 072 744 | 5 138 452  | 5 504 192  | r6 200 667  | 6 684 236  |
| Adelaide    | 2 023 096 | 2 558 172 | 2 552 132  | 2 733 862  | r2 977 127  | 3 216 054  |
| Perth       | 1 563 444 | 2 082 912 | 1 943 759  | 2 240 634  | r2 499 897  | 2 658 796  |
| Canberra    | 1 058 814 | 1 267 366 | 1 260 161  | 1 359 901  | r1 484 000  | 1 506 680  |
| Coolangatta | 1 075 000 | 1 478 093 | 1 543 469  | 1 682 179  | r1 853 340  | 1 973 467  |
| Cairns      | 826 738   | 1 184 098 | 1 183 902  | 1 358 377  | r1 577 719  | 1 694 346  |
| Hobart      | 566 303   | 666 515   | 689 112    | 727 177    | r798 210    | 836 392    |
| Townsville  | 418 412   | 379 756   | 446 276    | 389 410    | r435 518    | 454 567    |
| Launceston  | 348 009   | 401 947   | 402 114    | 458 963    | r506 727    | 543 835    |
| Darwin      | 402 549   | 452 621   | 478 715    | 553 179    | r646 658    | 713 206    |

(a) The unit of measurement is passengers on board.

Source: Department of Transport and Regional Development.

Airports

At 30 June 1997, there were 264 licensed airports in Australia and its external territories. Of these, 12 were operating as international airports servicing scheduled international airlines. The majority of licensed airports were owned and operated by local councils, State government departments and private companies. The remaining airports were owned and operated by the Federal Airports Corporation and the Department of Defence.

Following the sale of separate long-term (50 years) leasehold interests in Melbourne, Brisbane and Perth airports which came into effect on 2 July 1997, the Government is to sell an additional 15 airports currently owned and operated by the Federal Airports Corporation by 30 June 1998.

Air transport registrations and licences in force in Australia

At 14 December 1995, there were 9,633 aircraft registered in Australia.

At 27 June 1996, there were 29,682 holders of a current aeroplane pilot licence, including 19,076 private pilots, 6,061 commercial and senior commercial pilots and 4,545 air transport pilots. In addition there were 2,058 holders of a current helicopter pilot licence of whom 463 were private pilots, 1,222 commercial and senior commercial pilots and 373 air transport pilots. There were also 85 commercial balloon, 894 flight engineer and 51 navigator licences in force.

Accidents and casualties

As table 23.26 shows, the number of air transport accidents fell in 1996 compared with 1995, but there were the same number of fatalities.

23.26    AIR TRANSPORT(a), Accidents and Fatalities(b)

|                   | Accidents | Fatalities |
|-------------------|-----------|------------|
| Domestic airlines | no.       | no.        |
| 1991              | 323       | 54         |
| 1992              | 311       | 66         |
| 1993              | 319       | 67         |
| 1994              | 268       | 64         |
| 1995              | 269       | 51         |
| 1996              | 246       | 51         |

(a) Includes airlines, general aviation and sport aviation.  
(b) Includes accidents involving Australia-registered aircraft occurring overseas and accidents involving foreign-registered aircraft occurring in Australia.  
Source: Department of Transport and Regional Development — Bureau of Air Safety Investigation.

Government Transport Organisations

General

Australian Transport Council

The Australian Transport Council was established on 11 June 1993, subsuming the functions of the Australian Transport Advisory Council, and incorporates meetings of the Ministerial Council for Road Transport.

It comprises Commonwealth, State, Territory and New Zealand ministers responsible for transport, roads, and marine and ports matters. The Papua New Guinea Minister for Transport and Works, and the Australian Local Government Association are also represented on the Council as observers.

The Council meets bi-annually and its primary role is to review and coordinate various aspects of transport policy, development and administration. The Council initiates discussion and reports on issues raised by Council members, and provides advice to governments on the coordination and integration of all transport and road policy issues at a national level.

Bureau of Transport and Communications Economics

The Bureau of Transport and Communications Economics is a centre for applied economic research in the Commonwealth Department of Transport and Regional Development. It undertakes studies and investigations that contribute to an improved understanding of the factors influencing the efficiency and growth of

the transport and communications sector and the development of effective transport and communication policies.

## Road and rail

### AUSTROADS

AUSTROADS is the national association of road transport and traffic authorities. It provides strategic direction for the development, management and use of Australia's road system through consultation and discussion with peak industry bodies. The functions of AUSTROADS are coordination of research, and preparation of guides and standards for improvements in, and harmonisation of, practices within an agreed national policy framework. Its membership comprises the six Australian State and two Territory road authorities, the Commonwealth Department of Transport and Regional Development, the Australian Local Government Association and Transit New Zealand.

### ARRB Transport Research Ltd

ARRB Transport Research is a leading provider of value added technology and research services addressing land transport problems. The company's National Strategic Research Program, performed under contract to AUSTROADS, keeps Australia at the leading edge of developments in the road transport industry.

ARRB Transport Research employs over 140 people who form a multi-disciplinary pool of scientists, engineers, and specialist technical and support staff for infrastructure design, asset management, construction quality, materials testing, traffic operations, safety analysis, environmental sustainability, and freight issues.

The company has headquarters in Melbourne, with extensive laboratory and testing facilities and an office in Perth to service customers in Western Australia and the Indian Ocean Rim.

In addition to addressing Australia's transport problems, ARRB Transport Research has a rapidly growing export business with products sold in over 60 countries.

### National Road Transport Commission

The National Road Transport Commission (NRTC) is a small, independent body established as a result of the Special Premiers' Conference in 1991. Its charter is to develop nationally uniform or consistent policies and practices that improve the safety and efficiency of road transport, and

reduce its environmental impacts and the costs of administration. The NRTC and its national transport legislation were to have expired in January 1998. However, following an independent review, Heads of Government have now agreed to the NRTC being extended until 2004.

Transport reforms are developed in close consultation with Commonwealth, State and Territory Governments, the road transport industry, road user groups and other interested persons and organisations, for approval by Australia's Transport Ministers.

## Water

### ANL Limited

ANL Limited was incorporated as a public company on 1 July 1989, taking over all the assets, liabilities and operations of the former Australian Shipping Commission. All shares in ANL Limited are currently held by the Commonwealth Government.

ANL is an integrated international and domestic shipping operation participating in both blue-water and shore-based shipping activities, either in its own right or in joint venture arrangements with private sector interests. ANL's chief focus is on liner (container) trades in the Asia region.

As at 30 June 1996, the ANL Limited fleet consisted of 10 vessels. The fleet comprised two vehicle deck cargo ships totalling 14,782 deadweight tonnes (DWT), four cellular container ships totalling 131,028 DWT and four bulk carriers totalling 216,285 DWT.

### Australian Maritime Safety Authority (AMSA)

AMSA is a government business enterprise established under the *Australian Maritime Safety Authority Act 1990* on 1 January 1991. AMSA is responsible for maritime safety regulatory activities in Australia and provision of the Australian marine navigational aids network. It operates the Marine Rescue Coordination Centre, which coordinates major maritime search and rescue activities in the Australian region. It is also responsible for oil pollution prevention and clean up, and for the registration of Australian vessels.



## Air

### Airservices Australia

Airservices Australia and the Civil Aviation Safety Authority were established by the Commonwealth Parliament in July 1995, replacing the former Civil Aviation Authority, an independent government business enterprise established under the *Civil Aviation Act 1988*.

The function of Airservices Australia is to provide cost-effective services for Australia's aviation industry. These include: air traffic control; aeronautical information services; airport rescue and fire fighting; search and rescue; and navigation services. Airservices regards the safety of air navigation as its most important consideration. It is also required to act in a manner which ensures, as far as practicable, that the environment is protected from the effects of aircraft operations.

Airservices Australia has a prominent role in the implementation of the global Communications, Navigation and Surveillance/Air Traffic Management (CNS/ATM) system, which uses satellite technology to provide a more efficient air traffic system.

### Civil Aviation Safety Authority

The Civil Aviation Safety Authority (CASA) maintains, enhances and promotes the safety of civil aviation in the interests of the Australian public. CASA's focus is to work with industry to reduce aviation safety risks, the priority being the protection of fare paying passengers. This is achieved through effective safety regulation and by encouraging a greater acceptance by industry of its obligation to maintain high safety standards.

### Federal Airports Corporation

The Federal Airports Corporation is a Commonwealth government business enterprise which owns, manages and develops Australia's major airports. It provides infrastructure, ensures the safety and security of persons using the airports, and oversees commercial activities in those airports. This includes arrangements with airlines and other operators for the use of airports and for leasing of property and the letting of business concessions. The Corporation is required to be financially self-supporting. It has been established with a capital base and debt/equity ratio determined by the Commonwealth Government.

### International organisations

Australia is one of the 184 members (as at 20 February 1994) of the International Civil Aviation Organisation (ICAO) and is a member of the governing Council. Australia is also represented on the 15 member Air Navigation Commission which is responsible for drawing up international standards and procedures for the safety and efficiency of air navigation. In addition, Australia participates in the Commonwealth Air Transport Council, the South Pacific Regional Civil Aviation Council, the Airport Operators Council International, and the International Civil Airports Association.

### International agreements

As at 30 June 1997, Australia has air services agreements with 43 countries. Of these agreements, 40 have full treaty status and renegotiation of capacity and route rights has occurred under most of these to accommodate traffic growth on international routes to and from Australia. The other three agreements, with Chile, Kuwait and Pakistan, will be upgraded to treaty status once the draft agreements are incorporated into domestic law.

Australia also has seven air service arrangements which are of less than treaty status. These agreements and arrangements enable airlines of both Australia and its bilateral partners to operate a network of international air services to and from Australia.

### Multiple designation and the International Air Services Commission

The then Prime Minister announced a range of reforms to aviation policy in February 1992. These reforms included the introduction of multiple designation of Australia's international air services. Multiple designation enables Australian carriers, in addition to Qantas, to operate international services. To date six Australian carriers have been allocated rights to operate scheduled international air services: Qantas, Ansett, National Jet Systems, Asian Express Airlines, Flight West Airlines and Australia World Airways. A detailed analysis of overseas practices and views of the major Australian carriers was undertaken to develop the necessary legislative and administrative framework to implement multiple designation. The framework provides a mechanism for the allocation of international aviation capacity and route entitlements.



As a result of these reforms, the International Air Services Commission was established on 1 July 1992. Its role is to allocate the capacity negotiated under air services agreements and arrangements between Australia's international carriers. The Commission determines the merits of competing claims according to a strict public

benefit test laid down by the Government. This test includes matters such as tourism and trade, route economies, competition policy benefits and broader national interests. The Commission reports separately to Parliament.

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## Introduction

The communication services industries encompass telecommunications, postal and courier services. These industries comprise the Communication Services Division of the Australian and New Zealand Standard Industrial Classification (ANZSIC). The communication services industry sector is one of the fastest growing in Australia, and is estimated to have contributed between 4 and 5 per cent to Australia's Gross Domestic Product in 1995–96.

Separate industry details for telecommunications, postal and courier services are not available from the ABS. Selected data from external sources for the telecommunications and postal services industries are included in this chapter under the appropriate headings; however no data are available on courier services.

Information on radio and television broadcasting, including the role of the National Transmission Agency, the Australian Broadcasting Corporation, the Special Broadcasting Service and commercial radio and television services, is included in *Chapter 12, Culture and recreation*.

Table 24.1 shows key measures of industry structure and performance for the Communication Services Division compiled from the ABS's annual Economic Activity Survey.

## Telecommunication services within Australia

The telecommunication services industry is defined by ANZSIC to comprise those businesses mainly engaged in providing telecommunication services to the public, by wire, cable or radio.

As the ABS currently has no separate data for the telecommunication services industry, data from external sources have been included where available.

The section describes the industry in broad terms and distinguishes carriers from service providers. Statistics on the operations of carrier organisations are included, along with selected statistics on market shares in the basic voice services market, the resale revenue of service providers, and market shares in the digital and analogue mobile phone markets. ABS statistics on the household use of selected communications technologies are also provided.

**24.1 COMMUNICATION SERVICES INDUSTRIES, Structure and Performance**

|                                  | Unit | 1991–92 | 1992–93 | 1993–94 | 1994–95 | 1995–96 |
|----------------------------------|------|---------|---------|---------|---------|---------|
| <b>Industry structure</b>        |      |         |         |         |         |         |
| Operating businesses             | no.  | 457     | 889     | 1 400   | 2 136   | 2 390   |
| Employment                       | '000 | 126     | 116     | 117     | 127     | 134     |
| <b>Income statement</b>          |      |         |         |         |         |         |
| Sales of goods and services      | \$m  | 15 839  | 15 937  | 17 463  | 19 883  | 21 705  |
| Less cost of sales               | \$m  | 5 332   | 5 876   | 6 447   | 7 583   | 9 373   |
| Trading profit                   | \$m  | 10 507  | 10 060  | 11 016  | 12 300  | 12 332  |
| Plus interest                    | \$m  | 213     | 112     | 99      | 154     | 179     |
| Plus other operating income      | \$m  | 90      | 374     | 167     | 252     | 686     |
| Less labour costs                | \$m  | 5 163   | 5 225   | 5 529   | 6 451   | 6 297   |
| Less depreciation                | \$m  | 2 200   | 2 188   | 2 348   | 2 572   | 2 792   |
| Less other operating expenses    | \$m  | 44      | 77      | 172     | 200     | 144     |
| Earnings before interest and tax | \$m  | 3 403   | 3 057   | 3 233   | 3 483   | 3 964   |
| Less interest expenses           | \$m  | 1 263   | 918     | 762     | 615     | 724     |
| Operating profit before tax      | \$m  | 2 140   | 2 139   | 2 471   | 2 868   | 3 239   |
| Total assets                     | \$m  | 26 293  | 28 088  | 26 713  | 32 094  | 34 429  |
| Total liabilities                | \$m  | 15 504  | 14 797  | 13 457  | 17 814  | 17 753  |
| Net worth                        | \$m  | 10 789  | 13 291  | 13 256  | 14 280  | 16 676  |
| Capital expenditure              | \$m  | 4 184   | 3 821   | 3 328   | 4 488   | 8 051   |
| Gross operating surplus          | \$m  | 5 547   | 5 125   | 5 676   | 6 153   | 6 038   |
| Industry gross product           | \$m  | 10 710  | 10 350  | 11 205  | 12 605  | 12 335  |

Source: *Business Operations and Industry Performance, Australia (8140.0)*.

## Carriers

In September 1997 there were twelve licensed carriers in Australia, operating under the *Telecommunications Act 1997*. Under this Act, carriers must be able to provide digital data capability to at least 96% of the population by 31 December 1998.

Household balloting for choice of long distance carriers ended in December 1996, having begun in August 1993. More than 8.5 million subscribers were directly balloted, and response rates in the different cities and regions ranged from 18% to 58%. Telstra received about 85% and Optus about 15% of the ballots cast. Subscribers are entitled to change their carrier.

In June 1996 the Optus subsidiary, Optus Vision, began local call services to selected customers in Sydney and Melbourne.

## Telstra

Telstra Corporation Ltd is a full service carrier and was fully owned by the Commonwealth of Australia until November 1997. It operates similarly to private sector companies, in that it is profit driven, competes with other carriers and carriage service providers, and is subject to the same taxation and government charges as private sector companies. In November 1997, the Commonwealth sold about one third of its Telstra shares for approximately \$14b. Of the shares offered, 60% were bought by public applicants and Telstra employees, and 40% by institutional applicants.

In 1996–97 Telstra paid the Commonwealth Government dividends of \$4,146m, including \$3,150m special dividends (compared with \$1,368m in 1995–96). It paid the Commonwealth and State Governments a total of \$6,027m in dividends, taxes and charges (compared with \$3,270m in 1995–96).

By July 1997 Telstra had digitalised 84% of its national network of 9.5 million telephone lines. It is expected that digitalisation will be completed by December 1998.

In June 1995 Telstra introduced InContact services for low-income households. InContact gives these households rent-free access to in-coming telephone calls, and to emergency services. At the 30th of June 1996, Telstra was providing 64,500 InContact services.

Telstra's broadband cable network provides a platform for pay TV and multimedia services. By

July 1997 it passed more than two million homes. Telstra's pay TV services are provided by FOXTEL, a joint venture between Telstra and News Corporation. The service currently offers over 200,000 viewers in Sydney, Melbourne, Brisbane, Adelaide and Perth more than 30 channels of movies, sports, news, children's and multicultural programs.

Telstra operates 'Telstra on Australia', an Internet service provider, and various Internet services under the 'Big Pond' and 'OnRamp' labels. Telstra has put its residential and business subscriber directories onto the Internet.

Telstra employed 66,109 full-time staff at 30 June 1997 (compared with 76,522 in 1996).

Table 24.2 shows key financial results for Telstra over the three financial years 1994–95 to 1996–97.

**24.2 TELSTRA, Summary of Financial Results**

|                                   | 1994–95 | 1995–96 | 1996–97 |
|-----------------------------------|---------|---------|---------|
|                                   | \$m     | \$m     | \$m     |
| Operating revenue                 |         |         |         |
| Basic access                      | 1 713   | 1 727   | 1 740   |
| Local calls                       | 2 508   | 2 669   | 2 664   |
| National long distance calls      | 2 665   | 2 505   | 2 455   |
| International telephone services  | 1 412   | 1 338   | 1 342   |
| Mobile telecommunication services | 1 166   | 1 705   | 1 981   |
| Data & text services              | 1 364   | 1 574   | 1 883   |
| Other revenue items               | 3 253   | 3 721   | 3 918   |
| Total operating revenue           | 14 081  | 15 239  | 15 983  |
| Operating expenses(a)             | 10 602  | 11 464  | 11 654  |
| Profit before tax and abnormals   | 2 973   | 3 242   | 3 805   |
| Income tax                        | 654     | 1 002   | 995     |
| Operating profit(b)               | 2 003   | 2 174   | 2 568   |
| Dividends                         | 944     | 1 368   | 4 146   |
| Capital expenditure & investment  | 3 282   | 4 071   | 4 504   |
| Total assets                      | 24 083  | 24 362  | 25 858  |
| Gross debt                        | 5 854   | 5 143   | 7 981   |
| Shareholders' equity              | 11 727  | 12 668  | 9 938   |

(a) Before interest & abnormals. (b) After tax & minorities, before abnormals.

Source: Telstra Annual Report 1997.

## Optus

Optus Communications Pty Ltd was incorporated in 1991 as the holding company of Australia's first private communications carrier. In March 1997, Optus became the sole owner of its subsidiary, Optus Vision, formed in 1994 to establish an overhead optical fibre network to support pay TV, FM radio, video on demand, local telephone access and calls, and interactive services.

By December 1996 Optus Vision had rolled out its network past two million homes. Optus long distance services and the Optus Mobile Digital network are available to 99% and 88% of the population, respectively. In June 1996 Optus Vision began local call services to selected customers in Sydney and Melbourne.

Optus Vision had more than 180,000 pay TV subscribers at 30 June 1997. Optus employed 4,554 full-time staff at 30 June 1997 (compared with 4,003 in 1996). Table 24.3 shows key financial results for Optus for the years 1994–95 to 1996–97.

**24.3 OPTUS, Summary of Financial Results**

|                                      | 1994–95      | 1995–96      | 1996–97      |
|--------------------------------------|--------------|--------------|--------------|
|                                      | \$m          | \$m          | \$m          |
| Optus                                |              |              |              |
| Communications revenue               |              |              |              |
| long distance                        | 655          | 811          | 972          |
| mobile service                       | 494          | 765          | 1 132        |
| mobile equipment                     | 136          | 129          | 56           |
| Business network services            | 147          | 233          | 309          |
| Other revenue                        | 3            | 6            | 9            |
| Optus                                |              |              |              |
| Communications total revenue         | 1 435        | 1 944        | 2 478        |
| Optus Vision revenue                 | —            | —            | 27           |
| <b>Total Optus revenue</b>           | <b>1 435</b> | <b>1 944</b> | <b>2 506</b> |
| Optus                                |              |              |              |
| Communications operating costs       | 1 237        | 1 489        | 1 826        |
| Optus Vision operating costs         | —            | —            | 96           |
| <b>Total Optus operating costs</b>   | <b>1 237</b> | <b>1 489</b> | <b>1 913</b> |
| Optus                                |              |              |              |
| Communications earnings(a)           | 198          | 456          | 661          |
| Optus Vision earnings(a)             | —            | —            | 69           |
| <b>Total Optus earnings(a)</b>       | <b>198</b>   | <b>456</b>   | <b>593</b>   |
| Total depreciation/amortisation      | 158          | 293          | 441          |
| Total earnings before interest & tax | 40           | 162          | 152          |
| <b>Profit before tax</b>             | <b>17</b>    | <b>60</b>    | <b>123</b>   |

(a) Before interest, tax, depreciation and amortisation.

Source: Optus Communications.

## Vodafone

Vodafone commenced business in October 1993, and currently specialises in the supply of digital mobile communications. In July 1997 Vodafone had 325,000 mobile digital subscribers and reached 90% of the population.

Vodafone installs and operates its own facilities (including base stations, switches, towers and cable) for the provision of mobile services. Vodafone uses Telstra facilities to access the fixed network.

## Service providers

The *Telecommunications Act 1997* allows any person to provide a range of telecommunication services, provided they comply with the provisions of the Act. Providers may use telecommunications capacity acquired from a carrier (e.g. Telstra or Optus) or, in defined circumstances, from non-carrier infrastructure, to supply a range of local or national telecommunication services to consumer and commercial markets, including public switched voice, data and value-added services, and private network services.

Resale involves the acquisition of telecommunications capacity in the form of services from a carrier, and the supply of these services to third parties. A switchless reseller uses the carrier's switches and tariffed services to provide a similar type of service. A switched reseller has its own switches and network facilities, and leases line capacity from the carrier. It is able to supply additional services which significantly change the nature of the service acquired from the carrier. Table 24.4 shows the revenue from the resale of telecommunication services.

**24.4 RESALE REVENUE**

|                         | 1995       | 1996       | 1997(a)    |
|-------------------------|------------|------------|------------|
|                         | \$m        | \$m        | \$m        |
| Total resale revenue    | 500        | 700        | 1 000      |
| less margin to carriers | -400       | -560       | -725       |
| <b>Net value resale</b> | <b>100</b> | <b>140</b> | <b>275</b> |

(a) Estimated.

Source: Paul Budde Communications Pty Ltd, *Telecommunications Strategies Report 1996-97*.

The demand for fixed voice, mobile and data services is expected to continue its strong growth, but competition is expected to restrict the growth in providers' revenues, according to Paul Budde Communications Pty Ltd. Table 24.5 shows the market shares for basic voice services over the last three financial years. It shows the decline in Telstra's market share over the period, in the face of growth by the other providers.

**24.5 MARKET SHARES FOR BASIC VOICE SERVICES (INCLUDING MOBILE)**

|         | Telstra | Optus | Vodafone & resellers |
|---------|---------|-------|----------------------|
| Year    | %       | %     | %                    |
| 1994-95 | 93.0    | 5.0   | 2.0                  |
| 1995-96 | 87.0    | 10.0  | 3.0                  |
| 1996-97 | 84.5    | 11.5  | 4.0                  |

Source: Paul Budde Communications Pty Ltd, *Telecommunications Strategies Report 1996-97*.

**Mobile phones**

With the advent of deregulation under the *Telecommunications Act 1997*, and the entry of more carriers, the digital mobile market is expected to be a major growth area for some years. Tables 24.6 and 24.7 show the approximate market shares for both digital and analogue services before any impact of deregulation.

**24.6 DIGITAL MOBILE MARKET**

|         | Subscribers | Telstra | Optus | Vodafone |
|---------|-------------|---------|-------|----------|
| Year    | no.         | %       | %     | %        |
| 1994-95 | 309 000     | 39      | 37    | 24       |
| 1995-96 | 1 140 000   | 51      | 35    | 14       |
| 1996-97 | 2 246 000   | 49      | 37    | 14       |

Source: Paul Budde Communications Pty Ltd, *Telecommunications Strategies Report 1996-97*.

**24.7 ANALOGUE MOBILE MARKET**

|         | Subscribers | Telstra MobileNet | Optus |
|---------|-------------|-------------------|-------|
| Year    | no.         | %                 | %     |
| 1994-95 | 1 996 000   | 70                | 30    |
| 1995-96 | 2 675 000   | 70                | 30    |
| 1996-97 | 2 647 000   | 74                | 26    |

Source: Telstra MobileNet.

The Government has decided to phase out the Analogue Mobile Phone Service (AMPS) network by 1 January 2000, subject to appropriate safeguards, including possible retention of spectrum in rural areas with inadequate mobile coverage.

Analogue is available to 91% of the Australian population. According to advice from the carriers, digital coverage is: Telstra 91%, Optus 88%, and Vodafone 91%. Optus and Vodafone have digital coverage at some locations currently not covered by Telstra.

**Household use of communications and related technologies**

In 1996 the ABS conducted four quarterly surveys to measure the uptake of information and telecommunications technologies by households. The averaged results for selected communications technologies are shown in table 24.8.

Of particular note in the table is the high uptake rate for mobile phones (30% Australia wide). The proportion of capital city households with a mobile phone is appreciably higher (34%) than the proportion of such households in the remainder of Australia (23%).

Answering machines also appear to be popular with householders, demonstrated by the 26% uptake Australia wide. Again, the difference between capital city dwellers and the remainder is pronounced, with 31% and 19% uptake respectively. In comparison to answering machines, voice mail services are not highly popular, with just 4% of households subscribing.



## 24.8 HOUSEHOLDS OWNING/PAYING FOR SELECTED COMMUNICATIONS TECHNOLOGIES, 1996

|                            | Unit | Capital cities | Remainder of Australia | Total Australia |
|----------------------------|------|----------------|------------------------|-----------------|
| Facsimile machine          |      |                |                        |                 |
| Dedicated line             | %    | 3.8            | 2.9                    | 3.5             |
| Other connection           | %    | 7.2            | 7.0                    | 7.1             |
| Total households           | %    | 10.4           | 9.4                    | 10.0            |
| Mobile phone               | %    | 33.6           | 23.0                   | 29.7            |
| Car phone                  | %    | 4.5            | 3.7                    | 4.2             |
| Cordless phone             | %    | 16.2           | 10.9                   | 14.2            |
| Answering machine          | %    | 30.6           | 19.0                   | 26.3            |
| Pager                      | %    | 2.6            | 1.3                    | 2.1             |
| Voice mail                 | %    | 5.2            | 2.0                    | 4.0             |
| Pay TV(a)                  | %    | 6.2            | 2.3                    | 4.7             |
| None of the above          | %    | 43.0           | 57.5                   | 48.4            |
| Telephone connected        | %    | 97.9           | 95.0                   | 96.8            |
| Total number of households | '000 | 4 147          | 2 461                  | 6 608           |

(a) Pay TV services are not widely available in all areas of Australia.

Source: *Household Use of Information Technology, Australia, 1996 (8146.0)*.

While nearly 97% of households had a telephone connected, over 48% of households did not own or pay for any of the other technologies listed in the table.

About 300,000 people used a computer at home to access the Internet, 200,000 people used a computer at home to access electronic mail and 100,000 used a computer at home to access other online services and data bases.

While the averaged figure for pay TV uptake in Australian households in 1996 in table 24.8 is 4.7%, estimates from the November 1996 survey indicated that at that time 6.7% of Australian households subscribed to pay TV (capital cities 8.1%; remainder 4.1%). Paul Budde Communications Pty Ltd has estimated that by August 1997 this figure had increased to 16%.

## Postal communications

### Australian Postal Corporation

The Australian Postal Corporation (trading as Australia Post) is a government business enterprise owned by the Commonwealth of Australia. It operates under the *Australian Postal Corporation Act 1989*. Australia Post is independent of Government funding, achieves a substantial profit from its activities, and pays a

full range of taxes and charges, as well as allocating 60% of its after-tax profit as a dividend to the Government.

Australia Post offers letter and parcel delivery services within Australia and internationally. It also provides a range of related services including electronic bulk mail handling, advertising mail, bill payment, money order and banking services, express delivery services and philatelic products and services.

Australia Post's legal obligations require it to:

- provide Australians with a universal letter service;
- carry standard letters within Australia at a uniform price;
- ensure that the letter service meets the social, industrial and commercial needs of the community;
- perform its functions according to sound business practice; and
- perform its functions consistent with the Commonwealth's general policies.

Financial and other operating statistics are shown in tables 24.9, 24.10 and 24.11.

**24.9 AUSTRALIAN POSTAL CORPORATION, Financial Statement**

|                                         | Units  | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
|-----------------------------------------|--------|---------|---------|---------|---------|---------|
| Revenue                                 | \$'000 | 2 399.1 | 2 550.8 | 2 754.6 | 2 890.4 | 3 109.7 |
| Expenditure                             | \$'000 | 2 149.7 | 2 263.7 | 2 423.0 | 2 546.3 | 2 763.1 |
| Operating profit before abnormals & tax | \$'000 | 249.4   | 287.1   | 331.6   | 344.1   | 346.6   |
| Total assets                            | \$'000 | 2 016.8 | 2 102.7 | 2 327.3 | 2 382.0 | 2 588.6 |
| Return on assets                        | %      | 11.1    | 12.3    | 14.8    | 15.5    | 14.6    |
| Cost of Community Service Obligations   | %      | 46.0    | 62.0    | 65.0    | 72.0    | 67.0    |
| Total taxes & government charges        | %      | 273.0   | 227.0   | 254.0   | 306.0   | 308.0   |
| Dividends                               | %      | 62.0    | 90.0    | 120.0   | 143.0   | 220.0   |

Source: Australian Postal Corporation.

**24.10 AUSTRALIAN POSTAL CORPORATION, Mail Delivery Network and Post Outlets — 30 June 1997**

|                           | NSW/ACT   | Vic./Tas. | Qld       | WA      | SA/NT   | Aust.     |
|---------------------------|-----------|-----------|-----------|---------|---------|-----------|
|                           | no.       | no.       | no.       | no.     | no.     | no.       |
| Households receiving mail | 2 692 888 | 1 945 464 | 1 369 722 | 703 503 | 675 639 | 7 387 216 |
| Businesses receiving mail | 298 507   | 227 281   | 151 476   | 77 044  | 68 641  | 822 949   |
| Total delivery points     | 2 991 395 | 2 172 745 | 1 521 198 | 780 547 | 744 280 | 8 210 165 |
| Australia Post outlets    | 1 320     | 1 308     | 851       | 462     | 527     | 4 468     |

Source: Australian Postal Corporation.

**24.11 AUSTRALIAN POSTAL CORPORATION, Total Postal Articles Handled**

|                                            | 1992-93        | 1993-94        | 1994-95        | 1995-96        | 1996-97        |
|--------------------------------------------|----------------|----------------|----------------|----------------|----------------|
|                                            | million        | million        | million        | million        | million        |
| Posted in Aust. for delivery in Aust.      | 3 135.2        | 3 317.9        | 3 529.9        | 3 733.7        | 3 888.1        |
| Posted in Aust. for delivery overseas      | 130.1          | 146.0          | 146.4          | 159.1          | 157.3          |
| Posted overseas for delivery in Aust.      | 150.4          | 147.3          | 151.4          | 154.6          | 160.3          |
| <b>Total articles through mail network</b> | <b>3 415.7</b> | <b>3 611.2</b> | <b>3 827.7</b> | <b>4 047.4</b> | <b>4 205.7</b> |

Source: Australian Postal Corporation.

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## Introduction

Science and technology directly influence the strength and competitiveness of industry by providing a basis for technological change, thereby encouraging economic growth and development.

The Department of Industry, Science and Tourism is the key Commonwealth agency responsible for the development of science and technology policy in Australia. There are a number of other agencies, both Commonwealth and State, which have a direct interest in these policies, and in their interrelationships with other government policies relating to employment, education, industry, regional development, energy, communications and defence. There is also a range of social issues dependent on the spread of technology within Australia. These are the responsibilities of other Commonwealth and State departments.

Australia has a range of statistics relating to science and technology issues, most of which are compiled by the ABS and summarised in this chapter. There are a number of other indicators, notably patents and bibliometrics, which are compiled by the Department of Industry, Science and Tourism and reported in the Commonwealth Government's Science and Technology Statement. The latter indicators have not been included in this chapter. It concentrates on the input to Australia's research and development (R&D) effort, both in terms of the human resources devoted to R&D and the expenditure incurred in undertaking that activity. This emphasis reflects the priority given to this data source by analysts the world over.

## Expenditure and human resources devoted to R&D

The statistics which follow are based on the OECD definitions for national R&D surveys. The OECD defines R&D to comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of people, culture and society, and the use of this stock of knowledge to devise new applications.

Statistics on the amount of expenditure and human resources devoted to R&D in the business enterprise and higher education

sectors are collected annually, in varying degrees of detail. Comparable statistics on the general government and private non-profit sectors are collected biennially. Tables 25.1, 25.2 and 25.4 summarise the latest statistics available for all four sectors. Graph 25.3 brings together the information on R&D expenditure by sector to show total R&D expenditure at current and constant prices for the years 1986–87, 1988–89, 1990–91, 1992–93 and 1994–95.

## Expenditure on R&D — how does Australia compare internationally?

The most commonly used indicator for comparison purposes is the ratio of expenditure on R&D to Gross Domestic Product. As table 25.5 shows, in 1994–95 Australia spent 1.61% of its GDP on R&D, ranking it slightly above Canada, but well below some of the leading industrialised countries such as Japan (2.90%), the United States (2.54%), France (2.38%), Finland (2.35%), Germany (2.33%) and the United Kingdom (2.19%).

In terms of business enterprise R&D, Australia's ratio of R&D expenditure to GDP (0.74%) is again below the ratios for the large industrialised countries referred to earlier, but is also lower than for Canada (0.91%).

For government sector R&D as a percentage of GDP Australia ranks higher. A ratio to GDP of 0.43% places it fourth in the group of OECD member countries for which data are available, behind only Iceland (0.57%), France (0.50%) and Finland (0.44%). Government sector R&D as a percentage of GDP is much larger for Australia than for Japan, the United States and the United Kingdom.

For the higher education sector, Australia also ranks quite highly. With a ratio to GDP of 0.40%, it ranks behind only Japan (0.59%), Finland and Germany (both 0.44%). However, the Australian ratio is very similar to the ratios for a number of other countries including the United States, France, the United Kingdom and Canada.

These statistics themselves provide the background to the Australian Government's policy in the R&D area. It has been focused on finding ways in which Australian firms can be encouraged to invest in their own R&D. The policies have had a positive impact, as the ratio of business enterprise R&D to GDP has increased over the past decade from about 0.34% to the 1994–95 level of 0.74%.

**25.1 EXPENDITURE ON R&D, At Current Prices**

|                      | 1986-87        | 1987-88        | 1988-89        | 1990-91        | 1992-93        | 1994-95        |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sector               | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| Business enterprises |                |                |                |                |                |                |
| Private sector       | 1 165.1        | 1 388.2        | 1 649.1        | 1 896.1        | 2 617.8        | 3 153.3        |
| Public sector        | 123.5          | 117.6          | 149.2          | 203.6          | 244.8          | 336.3          |
| General government   |                |                |                |                |                |                |
| Commonwealth         | 786.5          | 797.0          | 869.6          | 1 034.0        | 1 151.1        | 1 178.4        |
| State                | 368.4          | 394.6          | 482.7          | 670.0          | 667.6          | 786.3          |
| Higher education(a)  | 881.7          | 983.6          | 1 076.8        | 1 332.8        | 1 695.2        | 1 829.6        |
| Private non-profit   | 49.1           | 53.9           | 53.3           | 85.4           | 101.2          | 143.7          |
| <b>Total</b>         | <b>3 374.3</b> | <b>3 734.9</b> | <b>4 280.7</b> | <b>5 221.9</b> | <b>6 477.7</b> | <b>7 427.6</b> |

(a) Data for calendar year ending within the financial year shown.

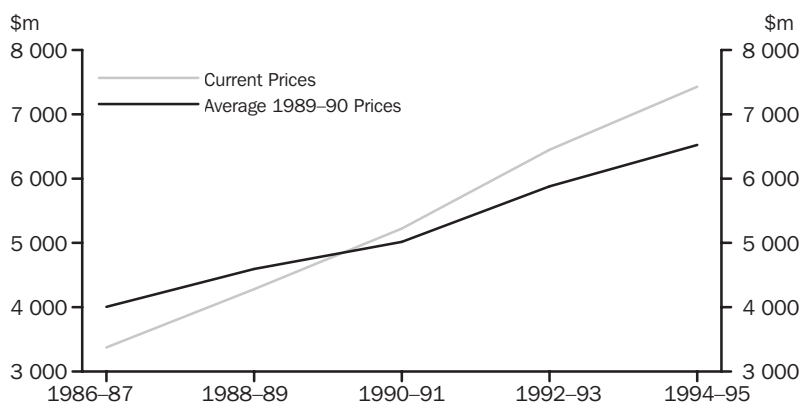
Source: Research and Experimental Development, All-Sector Summary, Australia (8112.0); Research and Experimental Development, Business Enterprises, Australia (8104.0).

**25.2 EXPENDITURE ON R&D, At Average 1989-90 Prices**

|                      | 1986-87        | 1987-88        | 1988-89        | 1990-91        | 1992-93        | 1994-95        |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sector               | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| Business enterprises |                |                |                |                |                |                |
| Private sector       | 1 406.1        | 1 530.0        | 1 785.2        | 1 811.7        | 2 368.6        | 2 762.6        |
| Public sector        | 141.3          | 129.6          | 159.7          | 190.8          | 220.5          | 302.5          |
| General government   |                |                |                |                |                |                |
| Commonwealth         | 919.5          | 892.4          | 914.4          | 989.2          | 1 001.2        | 1 000.7        |
| State                | 433.4          | 435.5          | 510.9          | 630.0          | 589.6          | 678.4          |
| Higher education(a)  | 1 044.5        | 1 121.8        | 1 166.1        | 1 312.5        | 1 608.6        | 1 651.5        |
| Private non-profit   | 59.6           | 62.0           | 57.5           | 81.2           | 89.6           | 126.2          |
| <b>Total</b>         | <b>4 004.4</b> | <b>4 171.3</b> | <b>4 593.8</b> | <b>5 015.4</b> | <b>5 878.1</b> | <b>6 521.9</b> |

(a) Data for calendar year ending within the financial year shown.

Source: Research and Experimental Development, All Sector Summary, Australia (8112.0); Research and Experimental Development, Business Enterprises, Australia (8104.0).

**25.3 EXPENDITURE ON R&D**

Source: Research and Experimental Development, All-Sector Summary, Australia (8112.0); Research and Experimental Development, Business Enterprise, Australia (8104.0).



**25.4 HUMAN RESOURCES DEVOTED TO R&D**

|                      | 1986–87           | 1987–88           | 1988–89           | 1990–91           | 1992–93           | 1994–95           |
|----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sector               | '000 person years | '000 person years | '000 person years | '000 person years | '000 person years | '000 person years |
| Business Enterprises |                   |                   |                   |                   |                   |                   |
| Private sector       | 16.2              | 17.0              | 19.2              | 19.2              | 20.7              | 23.5              |
| Public sector        | 1.4               | 1.5               | 1.6               | 1.9               | 2.2               | 2.2               |
| General government   |                   |                   |                   |                   |                   |                   |
| Commonwealth         | 11.5              | 11.5              | 10.9              | 10.7              | 11.0              | 10.6              |
| State                | 6.8               | 7.1               | 8.3               | 9.0               | 8.8               | 8.6               |
| Higher education(a)  | 23.2              | 24.3              | 24.9              | 27.1              | 35.4              | 40.1              |
| Private non-profit   | 0.9               | 1.0               | 1.0               | 1.3               | 1.4               | 1.7               |
| <b>Total</b>         | <b>60.1</b>       | <b>62.4</b>       | <b>65.9</b>       | <b>69.0</b>       | <b>79.5</b>       | <b>86.7</b>       |

(a) Data for calendar year ending within the financial year shown.

Source: Research and Experimental Development, All Sector Summary, Australia (8112.0); Research and Experimental Development, Business Enterprises, Australia (8104.0).

### Sources of funds for expenditure on R&D

In 1994–95, 93% of funding for R&D carried out by businesses came from the business sector, and it has remained at about this level since 1988–89. General government organisations provided 3% of funding for business R&D expenditure.

About 55% (down from 57% in 1992–93) of general government sector R&D was funded by Commonwealth government organisations and 31% (up from 29%) by State government organisations.

About 89% (down from 91% in 1992–93) of higher education R&D funding came from the Commonwealth Government. About 2% came from State Governments, and business enterprises provided 3%.

Commonwealth government organisations funded 30% of the R&D of the private non-profit sector in 1994–95 (down from 34% in 1992–93), while the contribution by State Governments was 16% (up from 13% in 1992–93).

Tables 25.6 and 25.7 show the data for 1992–93 and 1994–95 supporting the above analysis.

**25.5 EXPENDITURE ON R&D AS A PERCENTAGE OF GDP, OECD Countries — 1994–95**

|                  | Business    | Government  | Higher Education | Total(a)    |
|------------------|-------------|-------------|------------------|-------------|
| Country          | %           | %           | %                | %           |
| Japan            | 1.91        | 0.26        | 0.59             | 2.90        |
| United States    | 1.80        | 0.27        | 0.38             | 2.54        |
| France           | 1.47        | 0.50        | 0.38             | 2.38        |
| Finland          | 1.46        | 0.44        | 0.44             | 2.35        |
| Germany          | 1.54        | 0.36        | 0.44             | 2.33        |
| United Kingdom   | 1.43        | 0.30        | 0.38             | 2.19        |
| <b>Australia</b> | <b>0.74</b> | <b>0.43</b> | <b>0.40</b>      | <b>1.61</b> |
| Canada           | 0.91        | 0.25        | 0.39             | 1.57        |
| Iceland          | 0.43        | 0.57        | 0.34             | 1.40        |
| Italy            | 0.67        | 0.27        | 0.25             | 1.19        |
| Spain            | 0.47        | 0.18        | 0.27             | 0.93        |

(a) Includes Private Non-Profit.

Source: Research and Experimental Development, Business Enterprises, Australia (8104.0); Research and Experimental Development, General Government and Private Non-Profit Organisations, Australia (8109.0); Research and Experimental Development, Higher Education Organisations, Australia (8111.0); and Research and Experimental Development, All Sector Summary, Australia (8112.0).

## 25.6 EXPENDITURE ON R&amp;D, Sector By Source of Funds — 1992–93

|                      | Commonwealth<br>Government | State<br>Government | Business<br>enterprises | Private non-profit<br>and other<br>Australian(a) | Overseas     | Total          |
|----------------------|----------------------------|---------------------|-------------------------|--------------------------------------------------|--------------|----------------|
| Sector               | \$m                        | \$m                 | \$m                     | \$m                                              | \$m          | \$m            |
| Business enterprises |                            |                     |                         |                                                  |              |                |
| Private sector       | n.p.                       | n.p.                | 2 468.6                 | 7.9                                              | 85.8         | 2 617.8        |
| Public sector        | n.p.                       | n.p.                | 229.9                   | 7.5                                              | —            | 244.8          |
| General government   |                            |                     |                         |                                                  |              |                |
| Commonwealth         | 988.0                      | 11.7                | 74.7                    | 62.8                                             | 14.0         | 1 151.1        |
| State                | 56.5                       | 509.3               | 29.0                    | 69.1                                             | 3.8          | 667.6          |
| Higher education(b)  | 1 544.8                    | 34.8                | 41.7                    | 63.5                                             | 10.5         | 1 695.2        |
| Private non-profit   | 33.9                       | 12.8                | 6.9                     | 44.3                                             | 3.3          | 101.2          |
| <b>Total</b>         | <b>2 677.2</b>             | <b>577.5</b>        | <b>2 850.7</b>          | <b>255.0</b>                                     | <b>117.4</b> | <b>6 477.7</b> |

(a) Includes funds provided via government levies. (b) Data for calendar year 1992.

Source: Research and Experimental Development, All Sector Summary, Australia (8112.0); Research and Experimental Development, Business Enterprises, Australia (8104.0).

## 25.7 EXPENDITURE ON R&amp;D, Sector By Source of Funds — 1994–95

|                      | Commonwealth<br>Government | State<br>Government | Business<br>enterprises | Private non-profit<br>and other<br>Australian(a) | Overseas     | Total          |
|----------------------|----------------------------|---------------------|-------------------------|--------------------------------------------------|--------------|----------------|
| Sector               | \$m                        | \$m                 | \$m                     | \$m                                              | \$m          | \$m            |
| Business enterprises |                            |                     |                         |                                                  |              |                |
| Private sector       | n.p.                       | n.p.                | 2 912.8                 | 36.6                                             | 109.5        | 3 153.3        |
| Public sector        | n.p.                       | n.p.                | 321.5                   | 0.4                                              | 0.7          | 336.3          |
| General government   |                            |                     |                         |                                                  |              |                |
| Commonwealth         | 1 006.8                    | 11.4                | 85.3                    | 63.0                                             | 11.8         | 1 178.4        |
| State                | 68.7                       | 591.1               | 44.3                    | 78.4                                             | 3.9          | 786.3          |
| Higher education(b)  | 1 633.7                    | 42.2                | 63.9                    | 71.2                                             | 18.5         | 1 829.6        |
| Private non-profit   | 43.0                       | 22.7                | 14.0                    | 60.1                                             | 3.8          | 143.7          |
| <b>Total</b>         | <b>2 847.4</b>             | <b>680.1</b>        | <b>3 441.9</b>          | <b>309.8</b>                                     | <b>148.2</b> | <b>7 427.6</b> |

(a) Includes funds provided via government levies. (b) Data for calendar year 1994.

Source: Research and Experimental Development, All Sector Summary, Australia (8112.0); Research and Experimental Development, Business Enterprises, Australia (8104.0).

## Business sector

As statistics on the amount of expenditure and human resources devoted to R&D in the business enterprise sector are collected annually, data are available for 1995–96.

Business expenditure on R&D in Australia in 1995–96 (table 25.8) increased by 22% over 1994–95, with an increase of 3% in human resources devoted to R&D.

Expenditure on R&D increased in most industries. The only significant fall occurred in Textile, clothing, footwear and leather (down 25%). The largest increases occurred in Mining

(\$213m, 74%), Food, beverage and tobacco manufacturing (\$151m, 106%) and Wood and paper product manufacturing (\$103m, 130%).

In terms of socio-economic objectives (table 25.9), most business sector R&D was directed towards Economic development (\$3,864m or 91%). Of this, \$2,177m was directed towards Manufacturing and \$577m towards Information and communication services. About 3% was directed towards each of Defence and Society and 1% towards each of Environment and Advancement of knowledge.

**25.8 BUSINESS ENTERPRISES, R&D Resources By Industry of Enterprise**

|                                                      | Enterprises  |              |              | Expenditure on R&D |                |                | Effort on R&D                      |                                    |                                    |
|------------------------------------------------------|--------------|--------------|--------------|--------------------|----------------|----------------|------------------------------------|------------------------------------|------------------------------------|
|                                                      | 1993-94      | 1994-95      | 1995-96      | 1993-94            | 1994-95        | 1995-96        | 1993-94<br>'000<br>person<br>years | 1994-95<br>'000<br>person<br>years | 1995-96<br>'000<br>person<br>years |
| Industry of enterprise                               | no.          | no.          | no.          | \$m                | \$m            | \$m            |                                    |                                    |                                    |
| Mining (including services to mining)                | 86           | 99           | 130          | 330.9              | 287.3          | 500.5          | 0.8                                | 0.9                                | 1.0                                |
| Manufacturing                                        |              |              |              |                    |                |                |                                    |                                    |                                    |
| Food, beverage and tobacco                           | 130          | 178          | 193          | 140.2              | 141.8          | 292.6          | 1.2                                | 1.1                                | 1.3                                |
| Textile, clothing, footwear and leather              | 51           | 62           | 64           | 18.0               | 28.0           | 21.0           | 0.2                                | 0.2                                | 0.2                                |
| Wood and paper product                               | 33           | 45           | 36           | 106.2              | 79.3           | 182.1          | 0.2                                | 0.3                                | 0.3                                |
| Printing, publishing and recorded media              | 34           | 44           | 51           | 10.8               | 15.1           | 20.3           | 0.1                                | 0.2                                | 0.2                                |
| Petroleum, coal, chemical and associated product     | 305          | 363          | 368          | 272.9              | 320.1          | 348.0          | 2.1                                | 2.4                                | 2.5                                |
| Non-metallic mineral product                         | 50           | 77           | 87           | 31.3               | 45.3           | 80.3           | 0.3                                | 0.4                                | 0.4                                |
| Metal product                                        | 182          | 244          | 249          | 301.9              | 324.1          | 335.0          | 1.8                                | 2.0                                | 2.0                                |
| Motor vehicle and part and other transport equipment | 124          | 144          | 148          | 269.7              | 336.5          | 408.9          | 1.9                                | 2.0                                | 2.3                                |
| Photographic and scientific equipment                | 110          | 114          | 119          | 105.0              | 126.3          | 134.0          | 1.0                                | 1.1                                | 1.3                                |
| Electronic and electrical equipment and appliance    | 444          | 444          | 445          | 370.7              | 415.1          | 480.3          | 3.8                                | 3.9                                | 4.0                                |
| Industrial machinery and equipment                   | 251          | 291          | 312          | 78.3               | 80.8           | 107.0          | 0.9                                | 0.9                                | 1.0                                |
| Other manufacturing                                  | 62           | 94           | 97           | 14.6               | 19.2           | 20.5           | 0.2                                | 0.2                                | 0.2                                |
| Total manufacturing                                  | 1 776        | 2 100        | 2 169        | 1 719.6            | 1 931.6        | 2 429.9        | 13.6                               | 14.9                               | 15.7                               |
| Other industries                                     |              |              |              |                    |                |                |                                    |                                    |                                    |
| Wholesale and retail trade                           | 266          | 263          | 250          | 229.2              | 207.4          | 233.9          | 1.8                                | 1.7                                | 1.7                                |
| Finance and insurance                                | 29           | 36           | 33           | 119.1              | 100.9          | 113.1          | 1.2                                | 1.0                                | 1.1                                |
| Property and business services                       | 584          | 673          | 739          | 449.9              | 583.3          | 578.2          | 4.2                                | 4.9                                | 4.9                                |
| Scientific research                                  | 71           | 77           | 83           | 90.5               | 118.4          | 147.4          | 0.8                                | 0.9                                | 0.9                                |
| Other n.e.c.                                         | 109          | 136          | 148          | 180.7              | 260.7          | 239.9          | 1.3                                | 1.4                                | 1.3                                |
| Total other industries                               | 1 059        | 1 185        | 1 253        | 1 069.4            | 1 270.6        | 1 312.5        | 9.3                                | 9.9                                | 9.9                                |
| <b>Total all industries</b>                          | <b>2 921</b> | <b>3 384</b> | <b>3 552</b> | <b>3 120.0</b>     | <b>3 489.5</b> | <b>4 242.9</b> | <b>23.8</b>                        | <b>25.7</b>                        | <b>26.6</b>                        |
| Private sector contribution                          | 2 886        | 3 335        | 3 511        | 2 886.7            | 3 153.3        | 4 063.3        | 21.7                               | 23.5                               | 24.9                               |
| Public sector contribution                           | 35           | 49           | 41           | 233.3              | 336.3          | 179.6          | 2.1                                | 2.2                                | 1.7                                |

Source: Research and Experimental Development, Business Enterprises, Australia (8104.0).

## 25.9 BUSINESS ENTERPRISES, R&amp;D Resources By Socio-economic Objective — 1995–96

| Socio-economic objective                      | Type of expenditure |                |                           |                | Human resources<br>'000 person years |
|-----------------------------------------------|---------------------|----------------|---------------------------|----------------|--------------------------------------|
|                                               | Capital expenditure | Labour costs   | Other current expenditure | Total          |                                      |
|                                               | \$m                 | \$m            | \$m                       | \$m            |                                      |
| Defence                                       | 4.3                 | 50.0           | 64.9                      | 119.1          | 0.7                                  |
| Economic development                          |                     |                |                           |                |                                      |
| Plant — production and primary products       | 4.0                 | 14.5           | 12.5                      | 31.0           | 0.3                                  |
| Animal — production and primary products      | 6.6                 | 16.1           | 21.1                      | 43.8           | 0.3                                  |
| Mineral resources (excl. energy)              | 35.0                | 63.5           | 285.8                     | 384.3          | 1.1                                  |
| Energy resources                              | 42.8                | 41.8           | 121.4                     | 206.0          | 0.6                                  |
| Energy supply                                 | 10.7                | 27.8           | 61.4                      | 99.9           | 0.5                                  |
| Manufacturing                                 | 286.9               | 767.6          | 1 122.3                   | 2 176.8        | 13.5                                 |
| Construction                                  | 6.7                 | 20.4           | 25.2                      | 52.3           | 0.4                                  |
| Transport                                     | 5.8                 | 58.3           | 75.8                      | 140.0          | 1.0                                  |
| Information and communication services        | 55.5                | 306.7          | 214.7                     | 576.9          | 4.7                                  |
| Commercial services                           | 13.6                | 93.2           | 34.3                      | 141.2          | 1.5                                  |
| Economic framework                            | 0.5                 | 8.1            | 2.8                       | 11.3           | 0.1                                  |
| Total economic development                    | 468.2               | 1 417.9        | 1 977.5                   | 3 863.5        | 24.0                                 |
| Society                                       |                     |                |                           |                |                                      |
| Health                                        | 10.6                | 53.4           | 65.5                      | 129.6          | 0.9                                  |
| Education and training                        | 0.5                 | 2.8            | 0.8                       | 4.2            | 0.1                                  |
| Social development and community services     | 1.4                 | 6.0            | 4.5                       | 11.9           | 0.1                                  |
| Total society                                 | 12.5                | 62.3           | 70.8                      | 145.6          | 1.0                                  |
| Environment                                   |                     |                |                           |                |                                      |
| Environmental knowledge                       | 2.9                 | 8.3            | 7.7                       | 18.9           | 0.2                                  |
| Environmental aspects of economic development | 2.6                 | 7.5            | 14.7                      | 24.8           | 0.1                                  |
| Environmental management and other aspects    | 5.3                 | 6.1            | 8.4                       | 19.7           | 0.1                                  |
| Total environment                             | 10.8                | 21.8           | 30.7                      | 63.4           | 0.4                                  |
| Advancement of knowledge                      | 7.2                 | 23.7           | 20.5                      | 51.3           | 0.4                                  |
| <b>Total</b>                                  | <b>502.9</b>        | <b>1 575.6</b> | <b>2 164.4</b>            | <b>4 242.9</b> | <b>26.6</b>                          |

Source: Research and Experimental Development, Business Enterprises, Australia (8104.0).

### General government sector

Expenditure on R&D carried out by government organisations in Australia in 1994–95 was estimated to be \$1,965m at current prices, an increase of 8% over expenditure in 1992–93 (table 25.2). At average 1989–90 prices, expenditure in 1994–95 increased by 6% compared with 1992–93 (table 25.3).

The socio-economic objectives on which most government R&D expenditure was carried out were: Economic development (\$1,041m),

Environment (\$370m) and Society (\$258m) (table 25.10). Within Economic development, the main objectives were Animal production and primary products (\$268m), Plant production and primary products (\$270m) and Manufacturing (\$223m). Much the same pattern applies in terms of the human resources devoted to R&D (table 25.11). Labour costs continue to be the main component of R&D expenditure (46%), down from 50% in 1992–93.

**25.10 GENERAL GOVERNMENT ORGANISATIONS, Expenditure on R&D By Socio-economic Objective — 1994–95**

|                                                | Land and<br>buildings | Other capital<br>expenditure | Labour<br>costs | Other current<br>expenditure | Total          |
|------------------------------------------------|-----------------------|------------------------------|-----------------|------------------------------|----------------|
| Socio-economic objective                       | \$m                   | \$m                          | \$m             | \$m                          | \$m            |
| Defence                                        | 13.3                  | 26.3                         | 95.4            | 88.1                         | 223.1          |
| Economic development                           |                       |                              |                 |                              |                |
| Plant — production and primary products        | 21.5                  | 15.9                         | 126.8           | 105.8                        | 270.0          |
| Animal — production and primary products       | 22.8                  | 10.9                         | 124.6           | 109.6                        | 268.0          |
| Mineral resources (excluding energy)           | 1.2                   | 7.1                          | 30.9            | 28.9                         | 68.0           |
| Energy resources                               | 1.0                   | 4.3                          | 23.2            | 31.1                         | 59.7           |
| Energy supply                                  | 0.6                   | 3.7                          | 14.5            | 8.4                          | 27.2           |
| Manufacturing                                  | 12.9                  | 15.1                         | 109.5           | 85.4                         | 223.0          |
| Construction                                   | 0.2                   | 2.2                          | 16.3            | 12.3                         | 31.1           |
| Transport                                      | 0.4                   | 2.0                          | 8.7             | 7.3                          | 18.3           |
| Information and communication services         | 2.1                   | 3.9                          | 17.9            | 13.3                         | 37.3           |
| Commercial services                            | 0.1                   | 1.1                          | 5.7             | 3.5                          | 10.5           |
| Economic framework                             | 0.1                   | 2.2                          | 16.8            | 9.0                          | 28.0           |
| Total economic development                     | 63.0                  | 68.4                         | 495.0           | 414.5                        | 1 041.0        |
| Society                                        |                       |                              |                 |                              |                |
| Health                                         | 27.2                  | 18.6                         | 96.8            | 66.8                         | 209.4          |
| Education and training                         | 0.1                   | 0.3                          | 4.3             | 2.6                          | 7.4            |
| Social development and community services      | 1.0                   | 1.5                          | 20.3            | 18.3                         | 41.1           |
| Total society                                  | 28.3                  | 20.4                         | 121.5           | 87.7                         | 257.9          |
| Environment                                    |                       |                              |                 |                              |                |
| Environmental knowledge                        | 8.5                   | 14.2                         | 83.8            | 100.0                        | 206.5          |
| Environmental aspects of economic development  | 4.7                   | 7.3                          | 54.1            | 42.3                         | 108.4          |
| Environmental management and other aspects     | 1.6                   | 3.6                          | 24.6            | 25.4                         | 55.2           |
| Total environment                              | 14.9                  | 25.0                         | 162.5           | 167.7                        | 370.1          |
| Advancement of knowledge                       |                       |                              |                 |                              |                |
| Natural sciences, technologies and engineering | 2.7                   | 7.2                          | 30.4            | 29.3                         | 69.7           |
| Social sciences and humanities                 | 0.4                   | 0.2                          | 1.6             | 0.8                          | 2.9            |
| Total advancement of knowledge                 | 3.1                   | 7.4                          | 32.0            | 30.1                         | 72.6           |
| <b>Total</b>                                   | <b>122.6</b>          | <b>147.4</b>                 | <b>906.4</b>    | <b>788.2</b>                 | <b>1 964.7</b> |

Source: Research and Experimental Development, General Government and Private Non-Profit Organisations, Australia (8109.0).

**25.11 GENERAL GOVERNMENT ORGANISATIONS, Human Resources Devoted to R&D By Type of Employee — 1994–95**

|                                                | Researchers       | Technicians       | Other supporting staff | Total             |
|------------------------------------------------|-------------------|-------------------|------------------------|-------------------|
|                                                | '000 person years | '000 person years | '000 person years      | '000 person years |
| Socio-economic objective                       |                   |                   |                        |                   |
| Defence                                        | 1.2               | 0.6               | 0.2                    | 2.0               |
| Economic development                           |                   |                   |                        |                   |
| Plant — production and primary products        | 1.1               | 1.2               | 0.5                    | 2.8               |
| Animal — production and primary products       | 1.0               | 1.0               | 0.7                    | 2.7               |
| Mineral resources (excluding energy)           | 0.2               | 0.2               | 0.1                    | 0.6               |
| Energy resources                               | 0.2               | 0.2               | 0.1                    | 0.5               |
| Energy supply                                  | 0.1               | 0.1               | 0.0                    | 0.2               |
| Manufacturing                                  | 0.7               | 0.8               | 0.6                    | 2.1               |
| Construction                                   | 0.1               | 0.1               | 0.1                    | 0.3               |
| Transport                                      | 0.1               | 0.0               | 0.0                    | 0.2               |
| Information and communication services         | 0.2               | 0.1               | 0.1                    | 0.3               |
| Commercial services                            | 0.1               | 0.0               | 0.0                    | 0.1               |
| Economic framework                             | 0.2               | 0.1               | 0.1                    | 0.3               |
| Total economic development                     | 4.0               | 3.8               | 2.2                    | 10.1              |
| Society                                        |                   |                   |                        |                   |
| Health                                         | 1.5               | 0.9               | 0.3                    | 2.6               |
| Education and training                         | 0.1               | 0.0               | 0.0                    | 0.1               |
| Social development and community services      | 0.3               | 0.1               | 0.1                    | 0.4               |
| Total society                                  | 1.8               | 0.9               | 0.4                    | 3.1               |
| Environment                                    |                   |                   |                        |                   |
| Environmental knowledge                        | 0.7               | 0.7               | 0.3                    | 1.7               |
| Environmental aspects of economic development  | 0.3               | 0.4               | 0.3                    | 1.0               |
| Environmental management and other aspects     | 0.2               | 0.2               | 0.1                    | 0.5               |
| Total environment                              | 1.3               | 1.3               | 0.7                    | 3.3               |
| Advancement of knowledge                       |                   |                   |                        |                   |
| Natural sciences, technologies and engineering | 0.3               | 0.2               | 0.1                    | 0.6               |
| Social sciences and humanities                 | 0.0               | 0.0               | 0.0                    | 0.0               |
| Total advancement of knowledge                 | 0.4               | 0.2               | 0.1                    | 0.7               |
| <b>Total</b>                                   | <b>8.7</b>        | <b>6.8</b>        | <b>3.7</b>             | <b>19.1</b>       |

Source: Research and Experimental Development, General Government and Private Non-Profit Organisations, Australia (8109.0).

## Higher education sector

As statistics on the amount of expenditure devoted to R&D by higher education organisations are collected annually, data are available for calendar 1995.

Estimated expenditure on R&D carried out in Australia by the higher education sector in 1995 was \$2,039m, an increase of 11% over expenditure in 1994. At average 1989–90 prices, expenditure increased by 8% over this period.

Table 25.12 shows that the socio-economic objectives on which most higher education expenditure was carried out in 1995 were Advancement of knowledge (\$970m) and Society (\$503m). Within the latter, Health accounted for \$357m, or 18% of total R&D expenditure for this sector.

Direct labour costs accounted for 48% of total expenditure.

**25.12 HIGHER EDUCATION ORGANISATIONS, By Type of Expenditure on R&D — 1995**

|                                                | Land and buildings | Other capital expenditure | Direct labour costs | Scholarships | Other current expenditure | Total          |
|------------------------------------------------|--------------------|---------------------------|---------------------|--------------|---------------------------|----------------|
|                                                | \$m                | \$m                       | \$m                 | \$m          | \$m                       | \$m            |
| Socio-economic objective                       |                    |                           |                     |              |                           |                |
| Defence                                        | 0.1                | 1.1                       | 2.5                 | 0.3          | 2.4                       | 6.5            |
| Economic development                           |                    |                           |                     |              |                           |                |
| Plant — production and primary products        | 0.6                | 3.5                       | 26.9                | 2.6          | 26.5                      | 60.2           |
| Animal — production and primary products       | 1.4                | 2.1                       | 20.2                | 2.2          | 21.5                      | 47.4           |
| Mineral resources (excluding energy)           | 0.5                | 2.6                       | 11.0                | 2.0          | 17.2                      | 33.3           |
| Energy resources                               | 0.1                | 1.0                       | 5.7                 | 0.8          | 5.8                       | 13.3           |
| Energy supply                                  | 0.1                | 1.4                       | 5.8                 | 0.9          | 5.0                       | 13.3           |
| Manufacturing                                  | 1.1                | 8.4                       | 40.4                | 5.5          | 40.3                      | 95.8           |
| Construction                                   | 0.2                | 1.7                       | 11.9                | 1.3          | 9.7                       | 24.8           |
| Transport                                      | 0.2                | 0.4                       | 4.6                 | 0.2          | 3.8                       | 9.3            |
| Information and communication services         | 0.6                | 2.6                       | 17.1                | 1.3          | 14.0                      | 35.6           |
| Commercial services                            | 0.1                | 0.5                       | 5.5                 | 0.4          | 4.0                       | 10.6           |
| Economic framework                             | 0.4                | 2.8                       | 36.2                | 2.0          | 29.2                      | 70.6           |
| Total economic development                     | 5.5                | 27.0                      | 185.3               | 19.3         | 177.0                     | 414.1          |
| Society                                        |                    |                           |                     |              |                           |                |
| Health                                         | 3.2                | 13.8                      | 174.4               | 11.3         | 154.2                     | 356.9          |
| Education and training                         | 0.5                | 2.1                       | 50.5                | 1.9          | 35.5                      | 90.5           |
| Social development and community services      | 0.4                | 2.1                       | 30.3                | 1.0          | 21.7                      | 55.6           |
| Total society                                  | 4.0                | 18.0                      | 255.2               | 14.2         | 211.4                     | 502.9          |
| Environment                                    |                    |                           |                     |              |                           |                |
| Environmental knowledge                        | 2.5                | 6.4                       | 43.0                | 4.4          | 41.8                      | 98.2           |
| Environmental aspects of economic development  | 0.1                | 2.3                       | 10.6                | 1.0          | 9.6                       | 23.7           |
| Environmental management and other aspects     | 0.4                | 1.9                       | 9.5                 | 1.4          | 10.0                      | 23.3           |
| Total environment                              | 3.1                | 10.7                      | 63.2                | 6.9          | 61.5                      | 145.2          |
| Advancement of knowledge                       |                    |                           |                     |              |                           |                |
| Natural sciences, technologies and engineering | 9.5                | 51.5                      | 311.0               | 34.5         | 269.8                     | 676.2          |
| Social sciences and humanities                 | 5.7                | 7.6                       | 159.2               | 13.2         | 108.5                     | 294.2          |
| Total advancement of knowledge                 | 15.2               | 59.1                      | 470.2               | 47.7         | 378.4                     | 970.4          |
| <b>Total</b>                                   | <b>27.9</b>        | <b>115.9</b>              | <b>976.3</b>        | <b>88.4</b>  | <b>830.6</b>              | <b>2 039.1</b> |

Source: Research and Experimental Development, Higher Education Organisations, Australia (8111.0).

## Private non-profit sector

Expenditure on R&D carried out by private non-profit organisations in 1994–95 (\$144m) increased by 42% at current prices and 41% at average 1989–90 prices over 1992–93 expenditure (tables 25.2 and 25.3).

Health was the leading socio-economic objective for R&D expenditure of the private non-profit

sector, accounting for 79% or \$114m of its total R&D expenditure in 1994–95. The same was true for human resource usage. Labour costs continued to be the main component of R&D expenditure (47%) (table 25.13).

Table 25.14 shows the human resources devoted to R&D in terms of socio-economic objective, by type of employee.

### 25.13 PRIVATE NON-PROFIT ORGANISATIONS, By Type of Expenditure on R&D — 1994–95

|                                           | Land and buildings | Other capital expenditure | Labour costs | Other current expenditure | Total        |
|-------------------------------------------|--------------------|---------------------------|--------------|---------------------------|--------------|
|                                           | \$m                | \$m                       | \$m          | \$m                       | \$m          |
| Socio-economic objective                  | —                  | —                         | —            | —                         | —            |
| Defence                                   | —                  | —                         | —            | —                         | —            |
| Economic development                      | 0.2                | 0.2                       | 3.1          | 2.6                       | 6.0          |
| Society                                   |                    |                           |              |                           |              |
| Health                                    | 15.8               | 5.7                       | 52.0         | 40.4                      | 114.0        |
| Education and training                    | 0.5                | 0.2                       | 4.2          | 3.3                       | 8.2          |
| Social development and community services | 0.0                | 0.1                       | 1.2          | 0.9                       | 2.1          |
| Total society                             | 16.3               | 6.0                       | 57.4         | 44.5                      | 124.3        |
| Environment                               | 0.1                | 0.2                       | 1.8          | 1.1                       | 3.2          |
| Advancement of knowledge                  | 0.1                | 0.7                       | 5.6          | 3.8                       | 10.2         |
| <b>Total</b>                              | <b>16.7</b>        | <b>7.2</b>                | <b>67.8</b>  | <b>52.0</b>               | <b>143.7</b> |

Source: Research and Experimental Development, General Government and Private Non-Profit Organisations, Australia (8109.0).

### 25.14 PRIVATE NON-PROFIT ORGANISATIONS, Human Resources Devoted to R&D By Type of Employee — 1994–95

|                                           | Researchers  | Technicians  | Other supporting staff | Total        |
|-------------------------------------------|--------------|--------------|------------------------|--------------|
|                                           | person years | person years | person years           | person years |
| Socio-economic objective                  | —            | —            | —                      | —            |
| Defence                                   | —            | —            | —                      | —            |
| Economic development                      | 53           | 10           | 11                     | 74           |
| Society                                   |              |              |                        |              |
| Health                                    | 711          | 449          | 172                    | 1 332        |
| Education and training                    | 41           | 14           | 22                     | 77           |
| Social development and community services | 21           | 2            | 7                      | 30           |
| Total society                             | 773          | 466          | 200                    | 1 439        |
| Environment                               | 46           | 4            | 9                      | 58           |
| Advancement of knowledge                  | 58           | 48           | 14                     | 121          |
| <b>Total</b>                              | <b>930</b>   | <b>528</b>   | <b>235</b>             | <b>1 692</b> |

Source: Research and Experimental Development, General Government and Private Non-Profit Organisations, Australia (8109.0).



## Official organisations and administration

There are many organisations in Australia concerned in some way with the development of science and technology.

The Commonwealth Government's commitment to science and technology is reflected in the functions of the Department of Industry, Science and Tourism. The Department is concerned with the development and maintenance of Australia's scientific and technological capability.

A number of other Commonwealth Government organisations either support or carry out scientific and technological activities. State Governments are also involved in science and technology through State government departments, science and technology councils and other organisations. Non-government organisations participating in scientific and technological activities include higher education institutions, professional and learned bodies, private organisations and industry groups.

## Department of Industry, Science and Tourism

The Department, responsible for the majority of federally supported technology and industry development programs, includes the Science and Technology Division, the Australian Industrial Property Organisation and the Office of AusIndustry, including the Industry Research and Development Board programs. The Science and Technology Division, comprising the Science and Technology Policy Branch, the National Science and Technology Programs Branch, the International Science and Technology Branch and the Science and Technology Advisory Branch, is responsible for science and technology strategy, policy, analysis and awareness. It is responsible, *inter alia*, for the preparation of the annual Science and Technology Budget Statement.

The Department, through AusIndustry, administers the Tax Concession for Research and Development Scheme and the Strategic Assistance for Research and Development (START) Program. The scientific and technological bodies of the portfolio include the Commonwealth Scientific and Industrial Research Organisation, the Australian Nuclear Science and Technology Organisation and the Australian Institute of Marine Science.

## R&D Tax Concession Program

The tax concession for R&D, which commenced from July 1985, is the focus of one of the major programs in the Government's package of measures to encourage R&D in Australia.

The concession allows companies incorporated in Australia, public trading trusts and partnerships of eligible companies, to deduct up to 125% (prior to 21 August 1996, 150%) of eligible expenditure on R&D activities when lodging their corporate tax returns.

Expenditure eligible under the scheme includes: salaries, wages and other overhead costs which are directly related to the company's Australian R&D activities; contract expenditure; and capital expenditure on R&D plant and equipment (over three years). Expenditure on acquiring, or acquiring the right to use, technology for the purposes of the company's own R&D activities is 100% deductible.

The R&D projects must also satisfy a requirement for adequate Australian content. In addition the results of the R&D must be exploited on normal commercial terms and to the benefit of Australia.

To attract the tax concession deduction, annual eligible R&D expenditure must exceed \$20,000. Where R&D is contracted to either an approved Registered Research Agency (RRA) or a Cooperative Research Centre (CRC) this expenditure threshold is waived.

## Strategic Assistance for Research and Development Program

The Strategic Assistance for Research and Development (R&D START) Program replaced the R&D Syndication Program. It encompasses and builds upon other R&D support measures to provide a flexible package of assistance to industry for research, development and commercialisation.

The program, with total funding of \$520m over four years, complements the R&D Tax Concession Program.

Existing R&D grants and loans continue as part of the program, but are refocused on projects by small and medium enterprises with a total project value of less than \$2m.

R&D START meets the need for a program capable of funding larger projects, with more flexible funding arrangements, and aims to:

- provide a new competitive R&D scheme to replace the R&D Syndication Program;
- provide a mix of support measures based on large grants, loans and interest rate subsidies; and
- develop additional new market-based support measures in further consultation with industry.

There are three rounds of grants each year (every four months) to provide a timely response to companies in areas of rapidly developing technologies and markets.

The Industry Research and Development Board has flexibility to vary the combination of support to take account of variations in spillovers, closeness to market, nature of the technology and capacity to attract private finance. The basic elements are grants, loans which will normally be at commercial rates but may have repayment deferred, and interest subsidies to lenders who participate in financing the projects.

### **Commonwealth Scientific and Industrial Research Organisation (CSIRO)**

The CSIRO was established as an independent statutory authority by the *Science and Industry Research Act 1949*, which has been amended on a number of occasions since then. Its primary role is as an applications-oriented research organisation in support of major industry sectors and selected areas of community interest, with a strong commitment to the effective transfer of its results to users.

Briefly, the CSIRO's primary statutory functions are to:

- carry out scientific research for the benefit of Australian industry, the community, national objectives, national or international responsibilities, or for any other purpose determined by the Minister; and
- encourage or facilitate the application or utilisation of the results of such research.

Other functions include dissemination and publication of scientific information, international liaison in scientific matters, and provision of services and facilities.

The CSIRO's work is planned and prioritised on a sectoral basis and conducted through core business units — CSIRO Divisions. External advice on research priorities is channelled through Sector Advisory Committees. Each sector represents an industry group, market, or natural resource of national significance. There are 22 sectors covering research in five broad groupings:

- *Agribusiness* — Field Crops; Food processing; Forestry, wood and paper industries; Horticulture; Meat, dairy and aquaculture; Wool and textiles.
- *Environment and Natural Resources* — Biodiversity; Climate and atmosphere; Land and water; Marine.
- *Information Technology, Infrastructure and Services* — Information technology and telecommunications; Built environment; Measurement standards; Radio astronomy; Services.
- *Manufacturing* — Chemicals and plastics; Integrated manufactured products; Pharmaceuticals and human health.
- *Minerals and Energy* — Coal and energy; Mineral exploration and mining; Mineral processing and metal production; Petroleum.

The CSIRO has a staff of about 7,000 in more than 70 locations throughout Australia. About one-third of the staff are professional scientists, with the others providing technical, administrative or other support. The CSIRO's budget for 1996–97 was \$685m, of which \$444m was provided directly by the Commonwealth Government.

### **Australian Nuclear Science and Technology Organisation (ANSTO)**

ANSTO is Australia's national nuclear organisation and the centre of Australian nuclear expertise. It is established under the *Australian Nuclear Science and Technology Organisation Act 1987* as amended. Its mission is to benefit the Australian community by the development and peaceful application of nuclear science and technology in industry, medicine, agriculture, science and other fields.

### **Australian Institute of Marine Science (AIMS)**

AIMS is one of Australia's key research agencies and the only one committed primarily to marine research, with emphasis on tropical marine

science. The Institute is a federally funded statutory authority governed by a specialist Council appointed by the Australian Government. It was established in 1972 and has its headquarters at Cape Ferguson, 50 km south of the coastal city of Townsville. More recently a laboratory has been established in Dampier, Western Australia.

The Institute's mission is to generate the knowledge to support the sustainable use and protection of the marine environment through innovative, world-class scientific and technological research. Since it was set up, AIMS has established itself in strategic basic marine science supporting both public and private interests, targeting problems that are not being addressed by any other agency. The Institute has built strong links to Australian industry and to the wider Asia-Pacific region; it has established a long-term environmental monitoring program and built skills and knowledge in resource assessment, especially in tropical mangrove and coral reef systems; and is a leader in setting environmental assessment standards.

The research and development program is focused on research relating to the tropical coast and the continental shelf, and the development and application of technology to problems in this zone. Much of it involves long-term research which is geared towards an improved understanding of marine systems and the development of a capability to predict the

behaviour of complex tropical marine systems. Priority areas include improving our understanding of the impacts of natural and human-induced changes in the marine environment, assessment of living marine resources and marine biotechnology (e.g. pharmaceuticals). These efforts sit within the following strategic directions:

- *Understanding the marine environment* — physical behaviour of the oceans; nutrient pathways; global climate change; impacts of cyclones and river run-off.
- *Marine resources assessment* — taxonomy, distribution and abundance of key tropical faunas, especially coral reefs, mangroves and fish.
- *Ecologically sustainable development of marine resources* — predicting long-term changes in coral reefs; environmental impacts on coastal ecosystems.
- *Marine biodiversity* — evolution; genetic structure; discovery of bio-active compounds for drug development; linkages between populations (replenishment).
- *New marine research technologies* — underwater computing; micro-environment recording; laser technology; links between basic science and industrial applications (e.g. oil spill prediction).

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### Additional information

Additional information on topics presented in this chapter may be found in the annual reports of the organisations mentioned, particularly the Department of Industry, Science and Tourism and the CSIRO, and in the annual Science and Technology Statements. Statistical information on R&D for the years 1968–69, 1973–74 and 1976–77 may be found in the reports on Project SCORE published by the (then) Department of Science. Statistical information on R&D relating to 1978–79, 1981–82, and 1984–85 to 1995–96 may be obtained from the Australian Bureau of Statistics. Further statistical information on higher education is obtainable from the Department of Employment, Education, Training and Youth Affairs.

The Department of Industry, Science and Tourism's *Australian Science and Innovation Resources Brief, 1994* uses science and technology indicators to give a good overview and analysis of science and technology information in Australia. It presents information on R&D effort and expenditure; the science and technology work force; science and technology information resources; scientific equipment and facilities; patent activity; technology training; financial support for technological development; and the transfer of technical knowledge.

Additional information on some technology related issues, particularly on the use of information technology in the home, may be found in *Chapter 24, Communications*.

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## Introduction

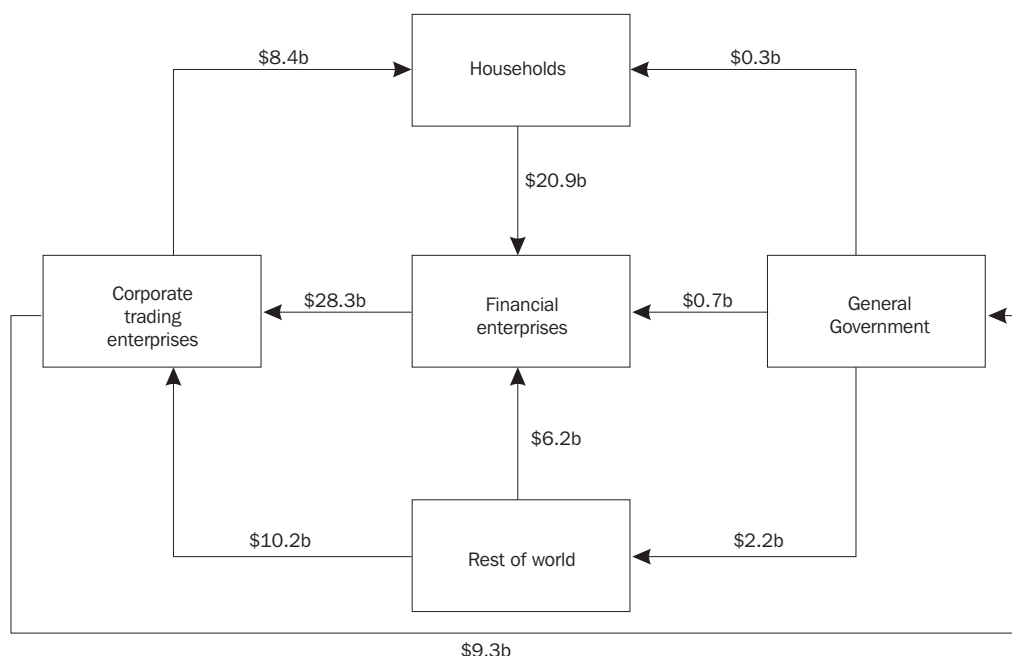
The financial system in Australia can be thought of as three overlapping components. The first component consists of financial enterprises (such as banks) and their supervising bodies (such as the Reserve Bank). The second consists of financial markets (for example, the bond market) and their participants (issuers such as governments and investors such as superannuation funds). The third is the payments system — that is, the cash, cheque and electronic means by which payments are effected — and its participants (for example, banks). The interaction of these components enables funds for investment or consumption to be made available from savings in other parts of the national or international economy.

This chapter provides a summary of the structure and activities of the three financial system components as they function currently. However, the structure and activities will change as a result of regulatory or deregulatory

processes. In April 1997 the Financial System Inquiry (the Wallis Committee) made recommendations on competition in and regulation of the Australian financial system, including establishment of a common regulatory framework for overlapping financial products. The Government has endorsed most of the recommendations, and legislation and administrative action to put the recommendations into effect are being formulated.

Diagram 26.1 illustrates the net financial flows between sectors during the year 1996–97. The arrows show the new flow from lenders to borrowers. For example, there is a \$20.9b net flow from the household sector to financial enterprises. This is mainly attributable to increased deposits by the household sector with financial intermediaries such as banks. There is also a \$28.3b net flow from financial enterprises to corporate trading enterprises. This is mainly attributable to increased loans by financial intermediaries and increased share purchases by financial institutions such as life offices.

26.1 INTER-SECTORAL FINANCIAL FLOWS DURING THE YEAR 1996–97



Note: The arrows show the direction of net financial flows from lending sectors to borrowing sectors. The number relating to each arrow indicates the value of that net flow during the period. Other claims are omitted from these diagrams. For this reason inter-sectoral borrowing does not equal inter-sectoral lending.

Source: Australian National Accounts: Financial Accounts (5232.0).

## Financial enterprises

Financial enterprises are institutions which engage in acquiring financial assets and incurring liabilities, for example, by taking deposits, borrowing and lending, providing superannuation, supplying all types of insurance cover, leasing, and investing in financial assets.

For national accounting purposes, financial enterprises are grouped into Deposit-taking institutions, Life offices and superannuation funds, and Other financial institutions. Deposit-taking institutions are those which are included in the Reserve Bank of Australia's *broad money* measure (see *Money supply measures* later in the chapter), and include the Reserve Bank itself, banks, building societies, credit unions, merchant banks, pastoral finance companies, finance companies, general financiers and cash management trusts. Life offices and superannuation funds cover the statutory funds of life offices, separately

constituted superannuation funds, approved deposit funds, friendly societies and long-service-leave boards. Other financial institutions cover health, export and general insurance companies, common funds, mortgage, fixed interest and equity unit trusts, issuers of asset-backed securities, economic development corporations, cooperative housing societies and credit union leagues.

Table 26.2 shows the relative size of these groups of financial enterprises in terms of their financial assets. This table has been compiled on a consolidated basis, that is, financial claims between institutions in the same grouping have been eliminated. The total is also consolidated, that is, financial claims between the groupings have been eliminated. For this reason, and because there are a number of less significant adjustments made for national accounting purposes, the statistics in the summary table will differ from those presented later in this chapter and published elsewhere.

### 26.2 ASSETS OF FINANCIAL INSTITUTIONS

|            | Deposit taking institutions |       |       | Life and<br>superannuation funds | Other financial<br>institutions | Consolidated total |
|------------|-----------------------------|-------|-------|----------------------------------|---------------------------------|--------------------|
|            | Reserve Bank                | Banks | Other |                                  |                                 |                    |
| At 30 June | \$b                         | \$b   | \$b   | \$b                              | \$b                             | \$b                |
| 1989       | 24.2                        | 236.1 | 135.5 | 150.9                            | 79.2                            | 546.0              |
| 1990       | 25.3                        | 270.4 | 141.3 | 169.9                            | 93.0                            | 607.1              |
| 1991       | 29.4                        | 299.4 | 135.8 | 184.2                            | 101.1                           | 639.5              |
| 1992       | 32.1                        | 307.8 | 128.6 | 210.1                            | 110.7                           | 674.2              |
| 1993       | 37.4                        | 330.0 | 118.1 | 226.1                            | 111.1                           | 703.5              |
| 1994       | 34.4                        | 360.6 | 118.7 | 247.5                            | 112.7                           | 745.3              |
| 1995       | 37.6                        | 381.7 | 132.0 | 263.4                            | 127.5                           | 816.3              |
| 1996       | 36.6                        | 422.9 | 144.0 | 293.9                            | 134.4                           | 882.7              |
| 1997       | 50.4                        | 503.3 | 150.0 | 344.2                            | 161.1                           | 1 022.1            |

Source: Australian National Accounts: Financial Accounts (5232.0).



## Deposit-taking institutions

### Banks

Banks are the largest deposit-taking institutions in Australia. At the end of June 1997 there were 50 banks operating in Australia. All are authorised to operate by the *Banking Act 1959*. Four major banks: the Australia and New Zealand Banking Group, National Australia Bank, Westpac Banking Corporation and the Commonwealth Bank of Australia, account for over half the total assets of all banks. These banks provide widespread banking services and an extensive retail branch network throughout Australia. The remaining banks provide similar banking services through limited branch networks often located in particular regions. As at 30 June 1996, banks operated 6,507 branches and 11,956 agencies. Of the total branches, 3,878 were located in metropolitan areas. Banking facilities were also available at 5,984 metropolitan agencies throughout Australia.

The *Banking Act 1959* seeks to provide a uniform legal framework for regulating the banking system and safeguarding bank depositors from loss. In recent years successive Commonwealth Governments have decreased the degree of regulation imposed on the

financial sector, and on the banks in particular. Significant amendments were made to the Act in January 1990. These formalised supervision requirements and restructured the banking industry, for example, by abolishing the distinction between trading and savings banks. In February 1992 the Act was again amended to provide more freedom for foreign banks to operate in Australia as branches of their parent.

Before 1959, central banking business was the responsibility of the Commonwealth Bank. The *Reserve Bank Act 1959* established the Reserve Bank of Australia as the central bank. This Act provides for the management of the Reserve Bank, the administration of the *Banking Act 1959* and the management of Australian note issue. The general functions of the Reserve Bank are the stability of the currency, the maintenance of full employment, and the economic prosperity and welfare of the Australian people. The Reserve Bank's stated current priority is to ensure an expanding economy together with low inflation.

The liabilities and financial assets of the Reserve Bank are set out in table 26.3. The liabilities and financial assets of the banks operating in Australia are shown in table 26.4.

**26.3 FINANCIAL ASSETS AND LIABILITIES, Reserve Bank of Australia**

|                                        | Amounts outstanding at 30 June |               |               |
|----------------------------------------|--------------------------------|---------------|---------------|
|                                        | 1995                           | 1996          | 1997          |
|                                        | \$m                            | \$m           | \$m           |
| <b>FINANCIAL ASSETS</b>                |                                |               |               |
| Cash and deposits                      | 1 249                          | 1 452         | 1 670         |
| Loans and placements                   | 90                             | 99            | 87            |
| Commonwealth Government Treasury Notes | 946                            | 3 623         | 5 219         |
| Long-term debt securities              | 14 749                         | 11 943        | 20 188        |
| Other financial claims                 | 123                            | 78            | 146           |
| International reserves                 | 20 184                         | 19 059        | 22 836        |
| <b>Total financial assets(a)</b>       | <b>37 341</b>                  | <b>36 254</b> | <b>50 146</b> |
| <b>LIABILITIES</b>                     |                                |               |               |
| Notes on issue                         | 18 538                         | 19 182        | 20 064        |
| Deposits                               | 6 135                          | 6 427         | 18 783        |
| Equity(b)                              | 11 243                         | 9 382         | 9 735         |
| Other financial claims                 | 112                            | 50            | 1 429         |
| <b>Total liabilities</b>               | <b>36 028</b>                  | <b>35 041</b> | <b>50 011</b> |

(a) Excludes non-financial assets (e.g. fixed assets, property, inventories, etc.). (b) Estimates based on net asset values. Assets do not equal liabilities as all other figures are reported at market values.

Source: Australian National Accounts: Financial Accounts (5232.0).

## 26.4 FINANCIAL ASSETS AND LIABILITIES, Banks(a)

|                                        | Amounts outstanding at 30 June |                |                |
|----------------------------------------|--------------------------------|----------------|----------------|
|                                        | 1995                           | 1996           | 1997           |
|                                        | \$m                            | \$m            | \$m            |
| <b>FINANCIAL ASSETS</b>                |                                |                |                |
| Cash and deposits                      | 21 153                         | 21 411         | 27 962         |
| Loans and placements                   | 263 970                        | 300 736        | 329 830        |
| Bills of exchange                      | 10 484                         | 12 360         | 12 972         |
| Promissory notes                       | 2 285                          | 3 303          | 1 384          |
| Commonwealth Government Treasury Notes | 9 938                          | 8 426          | 6 029          |
| Long-term debt securities              | 21 796                         | 20 815         | 24 144         |
| Equities                               | 7 181                          | 9 391          | 13 979         |
| Other financial claims                 | 10 038                         | 10 854         | 21 433         |
| Foreign claims                         | 21 467                         | 26 047         | 32 910         |
| <b>Total financial assets(b)</b>       | <b>368 312</b>                 | <b>413 343</b> | <b>470 643</b> |
| <b>LIABILITIES</b>                     |                                |                |                |
| Deposits                               | 235 358                        | 250 142        | 276 921        |
| Loans and placements                   | 13 343                         | 14 745         | 12 228         |
| Bills of exchange                      | 77                             | 84             | 43             |
| Bank certificates of deposit           | 36 306                         | 47 375         | 55 577         |
| Long-term debt securities              | 33 612                         | 38 402         | 48 035         |
| Equity                                 | 50 209                         | 57 361         | 82 436         |
| Other financial claims                 | 12 973                         | 14 771         | 28 046         |
| <b>Total liabilities</b>               | <b>381 878</b>                 | <b>422 880</b> | <b>503 286</b> |

(a) Does not include the Reserve Bank of Australia. (b) Excludes non-financial assets (e.g. fixed assets, property, inventories, etc.).

Source: Australian National Accounts: Financial Accounts (5232.0).

### Non-bank deposit-taking institutions

In addition to banks, financial institutions such as building societies, credit unions and merchant banks play an important part in the Australian financial system. In the Australian Financial Accounts, non-bank deposit-taking institutions are defined as those with liabilities included in the Reserve Bank's definition of *broad money*. Financial enterprises classified to this sub-sector are cash management trusts and corporations registered in categories A to G of the *Financial Corporations Act 1974*.

Regulation of some of these institutions is provided for by both Commonwealth and State legislation. Part of the regulatory framework is provided by the *Financial Corporations Act 1974* under which non-bank financial institutions

with assets in excess of \$1m are registered.

Under the Act, information and statistics on their operations are provided to the Reserve Bank.

In each State and Territory there is also legislation designed to regulate the activities and monitor the solvency position of particular types of financial institutions which operate as financial cooperatives. Examples of these are permanent building societies, credit unions and cooperative housing societies. In July 1992, the Australian Financial Institutions Commission was established to promote Australia-wide standards for the prudential supervision of building societies and credit unions. However responsibility for the implementation of these standards rests with the individual State supervisory authorities.

Table 26.5 shows the total assets of each category of non-bank deposit-taking institution.

## 26.5 NON-BANK DEPOSIT-TAKING INSTITUTIONS, Total Assets

|                                 | Amounts outstanding at 30 June |                |                |
|---------------------------------|--------------------------------|----------------|----------------|
|                                 | 1995                           | 1996           | 1997           |
|                                 | \$m                            | \$m            | \$m            |
| Permanent building societies    | 13 510                         | 13 108         | 10 576         |
| Credit cooperatives             | 14 024                         | 15 560         | 16 949         |
| Authorised money market dealers | 7 805                          | 4 085          | n.a.           |
| Money market corporations       | 51 177                         | 59 853         | 67 069         |
| Pastoral finance companies      | 2 672                          | 2 880          | 3 189          |
| Finance companies               | 31 563                         | 34 767         | 36 069         |
| General financiers              | 10 237                         | 11 445         | 14 067         |
| Cash management trusts          | 5 625                          | 7 036          | 10 714         |
| <b>Total</b>                    | <b>136 613</b>                 | <b>148 734</b> | <b>158 633</b> |

Source: Australian Financial Institutions Commission; Reserve Bank of Australia; ABS Managed Funds, Australia (5655.0).

There are eight categories of non-bank deposit-taking institutions. Permanent building societies are usually organised as financial cooperatives operating under State or Territory legislation. They are authorised to accept money on deposit. They provide finance principally in the form of housing loans to their members. They are registered with the Reserve Bank under the *Financial Corporations Act 1974* as category A financial corporations.

Credit cooperatives — also known as credit unions — are similar to building societies. As their name implies, they are organised as financial cooperatives which borrow from and provide finance to their members. Credit cooperatives mainly lend for purposes other than housing. They are registered under the *Financial Corporations Act 1974* as category B financial corporations.

Authorised dealers (category C financial corporations) were authorised by the Reserve Bank to buy and sell debt securities in the Official Short-term Money Market. The Bank supported them by offering them an end-of-day repurchase facility. In return, the authorised dealers had to be willing traders in approved securities and adhere to other requirements of the Reserve Bank. These arrangements came to an end on 9 August 1996 when the Reserve Bank withdrew all facilities from authorised dealers.

Money market corporations are similar to wholesale banks and for this reason they are often referred to as merchant or investment banks. They have substantial short-term borrowings which they use to fund business loans and investments in debt securities. They are registered as category D financial corporations.

Pastoral finance companies incur liabilities to lend to rural producers. They are category E financial corporations. Finance companies (category F financial corporations) borrow mainly on financial markets, for example by issuing debentures. They lend these funds to both businesses and persons. Their lending to businesses is sometimes called commercial lending and covers, for example, financial leasing of vehicle fleets. Their lending to persons is often in the form of instalment credit to finance retail sales by others. In contrast with finance companies, general financiers (category G financial corporations) are funded by their parent or another member of their company group. Typically they lend to corporate customers which buy products produced by member companies of their group. For example, a general financier within a motor vehicle manufacturing group will lend to the group's dealers to finance their inventory of vehicles.

Cash management trusts are investment funds which are open to the public. They invest the pooled monies of their unit holders mainly in money-market securities such as bills of exchange. As with other public unit trusts their operations are governed by a trust deed and their units are redeemable by the trustee on demand or within a short time. They are not registered with the Reserve Bank.

## Life offices and superannuation funds

Life insurance offices and superannuation funds are shown as a separate sub-sector in the Australian Financial Accounts because of the importance of these institutions as repositories

of long-term household savings. This sub-sector comprises:

- the statutory funds of life insurance offices (both their ordinary business and their superannuation business such as deferred annuities);
- superannuation funds whose assets are not in the statutory funds of life insurance offices;
- friendly societies; and
- long-service-leave boards.

Table 26.6 contains consolidated data showing the stock of financial assets and liabilities of the life office and superannuation fund sub-sector. The supplementary tables, 26.7 and 26.8, show the financial assets of life offices and superannuation funds. Data in these tables do not add to the totals in table 26.6. There are three main reasons. First, the supplementary tables cover only a subset of institutions in this sub-sector. Second, in table 26.6 balances outstanding between different types of institution are consolidated. Third, data from counterparties are used extensively in the summary table, where data are not available from the institutions covered.

## Life insurance companies

Life insurance companies offer termination insurance and investment policies. Termination insurance includes the payment of a sum of money on the death of the insured or on the insured receiving a permanent disability. Investment products include annuities and superannuation plans. The life insurance industry in Australia consists of 44 direct insurers and eight reinsurers. As with the banking industry, the life insurance industry is dominated by a few very large companies holding a majority of the industry's assets.

Life insurance companies are supervised by the Insurance and Superannuation Commission under the *Life Insurance Act 1995*. This came into effect on 1 July 1995 and replaced the *Life Insurance Act 1945*. The main differences between the two Acts are that the 1995 Act promotes increased consumer protection measures and places greater requirements on office bearers. The Insurance and Superannuation Commissioner has increased monitoring and investigative powers. Life insurance companies are also required to maintain minimum levels of solvency and capital adequacy.

### 26.6 FINANCIAL ASSETS AND LIABILITIES, Life Offices and Superannuation Funds

|                                                      | Amounts outstanding at 30 June |                |                |
|------------------------------------------------------|--------------------------------|----------------|----------------|
|                                                      | 1995                           | 1996           | 1997           |
|                                                      | \$m                            | \$m            | \$m            |
| <b>FINANCIAL ASSETS</b>                              |                                |                |                |
| Cash and deposits                                    | 20 030                         | 21 221         | 27 866         |
| Loans and placements                                 | 12 753                         | 14 559         | 16 962         |
| Bills of exchange                                    | 10 524                         | 11 922         | 11 742         |
| Promissory notes                                     | 5 929                          | 8 218          | 12 116         |
| Commonwealth Government Treasury Notes               | 144                            | 93             | 104            |
| Bank certificates of deposit                         | 6 795                          | 10 550         | 12 619         |
| Long-term debt securities                            | 52 129                         | 51 755         | 52 767         |
| Equities                                             | 87 768                         | 103 493        | 127 513        |
| Other financial claims                               | 4 078                          | 6 096          | 5 539          |
| Foreign claims                                       | 37 930                         | 40 338         | 50 067         |
| <b>Total financial assets(a)</b>                     | <b>238 080</b>                 | <b>268 245</b> | <b>317 295</b> |
| <b>LIABILITIES</b>                                   |                                |                |                |
| Loans and placements                                 | 304                            | 314            | 438            |
| Technical reserves of life offices and pension funds | 254 263                        | 282 501        | 327 578        |
| Equity                                               | 1 730                          | 3 696          | 5 919          |
| Other financial claims                               | 6 865                          | 7 399          | 10 299         |
| <b>Total liabilities</b>                             | <b>263 162</b>                 | <b>293 910</b> | <b>344 234</b> |

(a) Excludes non-financial assets (e.g. fixed assets, property, inventories, etc.).

Source: Australian National Accounts: Financial Accounts (5232.0).

**26.7 STATUTORY FUNDS OF AUSTRALIAN LIFE INSURERS, Total Assets**

|                               | June 1995      | June 1996      | June 1997      |
|-------------------------------|----------------|----------------|----------------|
|                               | \$m            | \$m            | \$m            |
| Cash and deposits             | 4 836          | 5 912          | 9 075          |
| Loans and placements          | 5 809          | 6 464          | 7 063          |
| Short-term securities         | 9 794          | 14 308         | 16 299         |
| Long-term securities          | 28 427         | 29 008         | 30 706         |
| Equities and units and trusts | 38 670         | 42 569         | 50 962         |
| Land and buildings            | 9 486          | 8 856          | 7 436          |
| Assets overseas               | 17 113         | 15 497         | 18 760         |
| Other                         | 4 385          | 4 684          | 5 120          |
| <b>Total</b>                  | <b>118 520</b> | <b>127 298</b> | <b>145 421</b> |

Source: *Managed Funds, Australia* (5655.0).

The operations of life insurance companies can be split effectively into two parts. The statutory funds contain policy owner monies that are invested according to policy owner expectations. Total assets in statutory funds of Australian life insurers are shown in table 26.7. The shareholders' funds must be held separately from the statutory funds and, as its name suggests, money in this account can be invested to the benefit of the shareholders.

### Superannuation funds

Superannuation funds have been established to provide retirement benefits for their members. Members make contributions during their employment and receive the benefits of this form of saving in retirement. In order to receive concessional taxation treatment, a superannuation fund must elect to be regulated under the *Superannuation Industry (Supervision) Act 1993*. These funds are then supervised by the Insurance and Superannuation Commission.

A regulated fund must have an approved trustee or provide old age pensions under its governing rules. An election to be regulated under the Act is irrevocable. As at June 1997 there were approximately 120,000 superannuation funds regulated under the Act.

Most superannuation funds are either open to the general public or sponsored by an employer.

Superannuation funds are employer-sponsored if an employer contributes to the fund on behalf of an employee. Employer-sponsored funds generally have closed memberships restricted to the employees of particular companies. Industry funds, such as those operated by trade unions, are also considered to be employer-sponsored funds.

Separate statistics on approved deposit funds (ADFs) were published up until June 1995. ADFs were established in 1984 to encourage long-term savings for retirement by allowing employees to roll over all or part of their eligible termination payments within the superannuation system instead of taking their benefit in cash. With the introduction of the *Superannuation Industry (Supervision) Act 1993*, eligible termination payments can now be rolled over into complying superannuation funds, complying ADFs or eligible annuities. The introduction of Retirement Savings Accounts in 1997 also now allows these payments to be deposited in capital guaranteed superannuation savings accounts operated by financial institutions without trustees. The diminished role of ADFs within the superannuation system as a result of these developments is the major reason for ceasing to publish separate statistics on their operations.

The assets of superannuation funds are shown in table 26.8.

**26.8 SUPERANNUATION FUNDS, Total Assets**

|                             | June 1995      | June 1996      | June 1997      |
|-----------------------------|----------------|----------------|----------------|
|                             | \$m            | \$m            | \$m            |
| Cash and deposits           | 12 662         | 13 629         | 17 189         |
| Loans and placements        | 6 019          | 7 335          | 9 302          |
| Bills of exchange           | 4 535          | 3 965          | 4 707          |
| Other short-term securities | 4 067          | 6 738          | 7 542          |
| Government securities       | 19 960         | 18 792         | 18 807         |
| Other long-term securities  | 2 495          | 2 433          | 2 664          |
| Shares                      | 39 059         | 44 456         | 55 853         |
| Units in trusts             | 10 230         | 15 201         | 18 884         |
| Other financial assets      | 1 679          | 3 129          | 2 605          |
| Other assets                | 33 744         | 39 255         | 48 239         |
| <b>Total</b>                | <b>134 450</b> | <b>154 933</b> | <b>185 792</b> |

Source: Joint ABS/ISC Survey.

## Other financial institutions

Other financial institutions can be grouped into eight broad categories:

- economic development corporations owned by governments;
- general, health and export insurance companies including those owned by governments;
- common funds;
- mortgage, fixed interest and equity public unit trusts;
- securitisers;

- investment companies;
- cooperative housing societies; and
- corporations (mainly credit union leagues) registered in category J of the *Financial Corporations Act 1974*.

Table 26.9 shows the stock of total assets of selected groups of other financial institutions.

Economic development corporations are owned by governments. As their name implies, these bodies are expected to finance infrastructure developments mainly in their home State or Territory.

**26.9 OTHER FINANCIAL INSTITUTIONS, Total Assets**

|                                | Amounts outstanding at 30 June |                |               |
|--------------------------------|--------------------------------|----------------|---------------|
|                                | 1995                           | 1996           | 1997          |
|                                | \$m                            | \$m            | \$m           |
| Private health insurance funds | 2 713                          | 2 381          | n.y.a.        |
| General insurers               | 43 621                         | 48 106         | 57 358        |
| Common funds                   | 4 138                          | 4 566          | 5 812         |
| Public unit trusts(a)          | 23 791                         | 28 037         | 42 304        |
| Securitisers                   | 9 845                          | 14 349         | 21 050        |
| Cooperative housing societies  | 1 751                          | 1 603          | n.y.a.        |
| Other(b)                       | 34 492                         | 32 598         | 37 673        |
| <b>Total</b>                   | <b>120 351</b>                 | <b>131 640</b> | <b>n.y.a.</b> |

(a) Excludes property and trading trusts. (b) Includes investment companies, category J financial institutions, economic development corporations.

Source: ABS Australian National Accounts: Financial Accounts (5232.0); ABS Managed Funds, Australia (5655.0); Private Health Insurance Administration Council Annual Report, Annual Statistics on Financial Institutions.

General insurers offer insurance other than life and health insurance; for example, house, car and marine insurances. Private sector general insurers are registered with and supervised by the Insurance and Superannuation Commission under the *Insurance Act 1973*. Health insurers are organisations which offer insurance to the general public or a restricted group to cover medical and hospital expenses. They are supervised by the Private Health Insurance Administration Council under the *National Health Act 1953*. There is only one government-owned export insurer in Australia.

Common funds are set up by trustee companies and are governed by State Trustee Acts. They allow the trustee companies to combine depositors' funds and other funds held in trust in an investment pool. They are categorised according to the main types of assets in the pool, for example, cash funds or equity funds.

Public unit trusts are investment funds open to the Australian public. Their operations are governed by a trust deed between the management company and a trustee company. They allow their unit holders to dispose of their units quickly. They may sell them back to the manager if the trust is unlisted, or sell them on the Australian Stock Exchange if the trust is listed. Public unit trusts are categorised according to the main types of assets in the pool; for example, property or equity. Only those which invest primarily in financial assets — mortgages, fixed interest or equity securities — are included here.

Investment companies are similar to equity trusts in that they invest in the shares of other companies. However, investors in investment companies hold share assets, not unit assets.

Securitisers issue debt securities which are backed by specific assets. The most common assets bought by securitisation trusts are residential mortgages. In the past these mortgages were provided by non-bank originators. However, during 1996–97 banks began to sell mortgages to securitisers. Other assets can also be used to back these securities, such as credit-card receivables and leases. Securitisers generally pool the assets and use the income on them to pay interest to the holders of the asset-backed securities.

Cooperative housing societies are similar to permanent building societies. In the past they were wound up after a set period but now they too are continuing bodies. They raise money

through loans from members (rather than deposits) and provide finance to members in the form of housing loans. Over recent years many cooperative housing societies have originated mortgages on behalf of securitisers.

The last of these financial institutions are companies (mainly credit union leagues) registered in category J of the *Financial Corporations Act 1974*. They are classified to other financial institutions because their liabilities are not included in the Reserve Bank's definition of *broad money*. Credit union leagues are companies performing treasury operations (funding activities, asset management) for their credit union members.

## Financial markets

Financial markets are used by participants to either raise funds (for example, by issuing securities) or invest savings (by buying securities and other financial assets). The major markets in the Australian financial system include the share market, bond market and money market. Descriptions and tables indicating prices and activity in various financial markets are provided below.

A significant influence in financial markets is the participation of institutional investors which control large pools of investment funds. These pools are accumulated by collective investment institutions and are often managed on a fee-for-service basis by investment managers. A summary of the activities of these institutions is also provided.

## Credit market

Credit may be defined broadly as funds provided to those seeking to borrow. However, analytically useful measures of credit usually exclude borrowings by financial enterprises because their main role is as an intermediary, i.e. they borrow in order to lend. Also, lending and borrowing between enterprises which have a special relationship, such as between companies in the same group or between government agencies, are often excluded from credit measures because transactions between these bodies frequently are of a non-market nature. Similarly, some types of financial instrument, such as trade debts, are not considered to be part of an organised market. All of these types of transactions are omitted from table 26.10, which presents a summary of the demand for credit in Australia by the non-financial sectors.



## 26.10 DEMAND FOR CREDIT

|                                                                   | Net transactions during year |               |               |
|-------------------------------------------------------------------|------------------------------|---------------|---------------|
|                                                                   | 1994-95                      | 1995-96       | 1996-97       |
|                                                                   | \$m                          | \$m           | \$m           |
| Funds (including equity) raised on conventional credit markets by |                              |               |               |
| Commonwealth public trading enterprises                           | -1 408                       | 218           | 2 606         |
| State and local government public trading enterprises             | -1 264                       | -1 871        | -134          |
| Private trading enterprises                                       | 15 700                       | 47 673        | 31 230        |
| Commonwealth general government                                   | 13 041                       | 5 606         | 2 472         |
| State and local general government                                | 2 097                        | -11 557       | -6 053        |
| Households and unincorporated businesses                          | 25 828                       | 30 806        | 27 134        |
| <b>Total</b>                                                      | <b>53 994</b>                | <b>70 875</b> | <b>57 255</b> |

Note: Positive numbers indicate an increase in borrowings. Negative numbers indicate debt repayment.

Source: Australian National Accounts: Financial Accounts (5232.0).

## 26.11 BANK RETAIL DEPOSIT AND LENDING RATES

|                                 | June 1995 | June 1996 | June 1997 |
|---------------------------------|-----------|-----------|-----------|
|                                 | % p.a.    | % p.a.    | % p.a.    |
| Bank deposit rates              |           |           |           |
| Six month fixed deposit         | 6.75      | 6.55      | 4.70      |
| Cash management accounts(a)     | 5.90      | 5.70      | 3.70      |
| Bank lending rates              |           |           |           |
| Housing loans — variable        | 10.50     | 9.75      | 7.20      |
| Small business loans — variable | 11.10     | 11.25     | 9.50      |
| Credit cards                    | 16.70     | 16.70     | 16.00     |

(a) Accounts from \$20 000 to less than \$100 000.

Source: Reserve Bank of Australia Bulletin.

It includes raisings by the issue of both debt and equity securities.

Table 26.11 shows indicative interest rates for bank borrowing and lending. Another view of activity in the credit market is provided later in this chapter under *Lending by financial institutions*.

## Stock market

The Australian stock market provides a mechanism for trading equities (shares), units in trusts, options, and some fixed-interest securities. It is operated nationally by Australian Stock Exchange Limited (ASX), which is responsible for the day-to-day running and surveillance of stock market trading. In the past,

trading on the stock market was undertaken by open outcry. Now trading is electronic, conducted using the Stock Exchange Automated Trading System. The stock market now effectively consists of a network of computers with buyers and sellers located anywhere in the country.

ASX classifies listed companies according to their major activity and produces indexes based on these classifications. Table 26.12 summarises the performance of the major indexes over the last three financial years.



**26.12 AUSTRALIAN STOCK MARKET INDEXES(a)**

|                 | 1994–95 | 1995–96 | 1996–97 |
|-----------------|---------|---------|---------|
| All ordinaries  |         |         |         |
| Index(b)        | 2 000.8 | 2 231.7 | 2 662.7 |
| High            | 2 122.1 | 2 326.0 | 2 725.9 |
| Low             | 1 823.3 | 2 003.3 | 2 096.1 |
| All industrials |         |         |         |
| Index(b)        | 3 012.1 | 3 305.8 | 4 173.0 |
| High            | 3 095.3 | 3 465.4 | 4 301.8 |
| Low             | 2 685.0 | 3 006.8 | 3 177.5 |
| All resources   |         |         |         |
| Index(b)        | 1 235.7 | 1 423.3 | 1 500.4 |
| High            | 1 433.2 | 1 524.7 | 1 530.3 |
| Low             | 1 129.5 | 1 244.7 | 1 275.6 |

(a) Base 31 December 1979 = 500. (b) Share prices on joint trading floors; average of daily figures for June.

Source: Australian Stock Exchange, *Monthly Index Analysis*.

Table 26.13 shows the market value of Australian shares and units in trusts on issue — both listed and unlisted. It shows the amount on issue by sector of issuer and sector of holder of equities and units. Definitions of the sectors shown in this table can be found in *Australian National Accounts: Financial Accounts* (5232.0).

**26.13 THE EQUITY MARKET(a)**

|                                                          | Amounts on issue at 30 June |                |                |
|----------------------------------------------------------|-----------------------------|----------------|----------------|
|                                                          | June 1995                   | June 1996      | June 1997      |
|                                                          | \$m                         | \$m            | \$m            |
| <b>Total equities and units in trusts</b>                | <b>587 428</b>              | <b>638 345</b> | <b>740 438</b> |
| Issued by                                                |                             |                |                |
| Commonwealth public trading enterprises(b)               | 26 931                      | 24 989         | 24 509         |
| State and local government public trading enterprises(b) | 111 107                     | 107 971        | 104 980        |
| Private corporate trading enterprises(c)                 | 330 455                     | 372 544        | 427 144        |
| Reserve Bank of Australia(b)                             | 11 243                      | 9 382          | 9 735          |
| Banks(c)                                                 | 52 964                      | 61 050         | 90 600         |
| Non-bank deposit taking institutions(c)                  | 15 435                      | 15 940         | 16 041         |
| Life offices and superannuation funds(c)                 | 1 730                       | 3 696          | 6 393          |
| Other financial institutions(c)                          | 37 302                      | 42 539         | 60 850         |
| State and local general government(b)                    | 261                         | 234            | 186            |
| Held by                                                  |                             |                |                |
| Commonwealth public trading enterprises                  | 233                         | 225            | 268            |
| State and local public trading enterprises               | 33                          | 38             | 48             |
| Private corporate trading enterprises                    | 27 736                      | 38 516         | 50 170         |
| Banks                                                    | 9 936                       | 13 080         | 22 143         |
| Non-bank deposit taking institutions                     | 2 555                       | 3 209          | 3 976          |
| Life offices and superannuation funds                    | 87 768                      | 103 493        | 127 987        |
| Other financial institutions                             | 30 019                      | 35 726         | 46 319         |
| Commonwealth government                                  | 42 285                      | 39 882         | 35 780         |
| State and local general government                       | 113 271                     | 108 940        | 105 904        |
| Households                                               | 105 916                     | 104 686        | 130 508        |
| Non-residents                                            | 167 676                     | 190 550        | 217 335        |

(a) Includes units in trusts. (b) Net asset values. (c) These estimated market values are considered to be of poor quality. They should be used cautiously.

Source: Australian National Accounts: *Financial Accounts* (5232.0).

## Money market

Rates in the market at end June of the last three financial years are shown in table 26.14.

Money market securities have an original term to maturity of less than one year, often 90 or 180 days. They are issued by borrowers at a discount to face value and carry no income payment other than the repayment of face value at maturity. To enhance liquidity, money market securities conform to standardised attributes concerning risk and discount rates. Because of the standardisation, the securities of different issuers are often combined in the one parcel of securities for trading purposes. There are two types of securities: bills of exchange and promissory notes. The risk of a bill of exchange is reduced by an acceptor or endorser adding their name to the security for a fee. Most bills of exchange traded in the market are bank-accepted bills. Promissory notes are issued by institutions whose credit worthiness is equal

to or better than banks: the Commonwealth Government issues Treasury Notes, State Governments and large corporations issue commercial paper and banks issue negotiable certificates of deposit. Table 26.15 shows the amount on issue by sector of issuer and sector of holder of the various types of money market securities.

**26.14 SHORT-TERM MONEY MARKET RATES**

|                                  | June<br>1995 | June<br>1996 | June<br>1997 |
|----------------------------------|--------------|--------------|--------------|
|                                  | % p.a.       | % p.a.       | % p.a.       |
| 11am call                        | 7.51         | 7.51         | 5.57         |
| Bank-accepted bills — 90<br>days | 7.57         | 7.59         | 5.28         |

Source: Reserve Bank of Australia Bulletin.

**26.15 SHORT-TERM DEBT SECURITIES**

|                                            | Amounts outstanding at 30 June |                |                |
|--------------------------------------------|--------------------------------|----------------|----------------|
|                                            | 1995                           | 1996           | 1997           |
|                                            | \$m                            | \$m            | \$m            |
| <b>ISSUED BY</b>                           |                                |                |                |
| Commonwealth public trading enterprises    | 2 898                          | 3 398          | 3 275          |
| State and local public trading enterprises | 205                            | 118            | 99             |
| Private trading enterprises                | 55 531                         | 63 763         | 66 235         |
| Banks                                      | 39 114                         | 50 979         | 58 974         |
| Non-bank deposit taking institutions       | 17 272                         | 23 832         | 25 496         |
| Other financial institutions               | 9 206                          | 10 768         | 12 333         |
| Commonwealth general government            | 14 163                         | 15 298         | 13 303         |
| State and local general government         | 19 395                         | 9 309          | 5 374          |
| Households and unincorporated businesses   | 3 788                          | 2 933          | 2 290          |
| <b>Total</b>                               | <b>161 572</b>                 | <b>180 398</b> | <b>187 379</b> |
| <b>HELD BY</b>                             |                                |                |                |
| Commonwealth public trading enterprises    | 3 217                          | 1 284          | 1 405          |
| State and local public trading enterprises | 381                            | 499            | 552            |
| Private trading enterprises                | 5 707                          | 9 616          | 10 232         |
| Reserve Bank                               | 946                            | 3 623          | 5 219          |
| Banks                                      | 25 438                         | 27 609         | 23 739         |
| Non-bank deposit taking institutions       | 13 657                         | 12 115         | 15 820         |
| Life offices and superannuation funds      | 23 392                         | 30 783         | 36 581         |
| Other financial institutions               | 20 002                         | 27 947         | 32 599         |
| State and local general government         | 9 088                          | 7 873          | 7 415          |
| Households and unincorporated businesses   | 4 886                          | 4 975          | 4 116          |
| Rest of world                              | 54 858                         | 54 074         | 49 701         |
| <b>Total</b>                               | <b>161 572</b>                 | <b>180 398</b> | <b>187 379</b> |

Source: Australian National Accounts: Financial Accounts (5232.0).

## Long-term debt securities market

Long-term debt securities (bonds) are issued with original terms to maturity of one or more years. Usually the investors are paid a set periodic interest, called a coupon, for the life of the security and receive their initial investment back at maturity. Some securities have variable interest rates, some have principal repayments indexed, and there is a small amount of zero-coupon, or deep discount securities which are issued at a discount to face value.

Governments, trading enterprises and financial institutions issue debt securities to finance long-term requirements. For these entities, the debt securities market generally provides a cheaper source of funds than borrowing from banks and other financial institutions.

Table 26.16 shows the interest rates at end June of the last three financial years for a range of long-term debt securities.

The main issuers of long-term debt securities are the Commonwealth Government and State Governments through their central borrowing authorities. Issues by Commonwealth, State and local public trading enterprises may be guaranteed by their respective governments. This provides the bond issue with a higher credit rating, meaning that the market will purchase the bonds at a lower yield. Corporate bonds are issued only by very large private trading and financial enterprises. The amounts outstanding on long-term debt securities at end June for the last three financial years are shown in table 26.17.

**26.16 LONG-TERM DEBT SECURITIES, Interest Rates**

|                            | June 1995 | June 1996 | June 1997 |
|----------------------------|-----------|-----------|-----------|
|                            | % p.a.    | % p.a.    | % p.a.    |
| Treasury bonds             |           |           |           |
| 3 years                    | 8.27      | 8.33      | 5.93      |
| 5 years                    | 8.61      | 8.59      | 6.44      |
| 10 years                   | 9.21      | 8.88      | 7.05      |
| NSW T-corp bonds           |           |           |           |
| 3 years                    | 8.31      | 8.45      | 5.94      |
| 5 years                    | 8.80      | 8.74      | 6.51      |
| 10 years                   | 9.47      | 9.16      | 7.23      |
| Finance company debentures |           |           |           |
| 2 years                    | 7.70      | 7.60      | 5.50      |
| 3 years                    | 7.80      | 7.80      | 5.90      |

Source: Reserve Bank of Australia Bulletin.

## 26.17 LONG-TERM DEBT SECURITIES

|                                            | Amounts outstanding at 30 June |                |                |
|--------------------------------------------|--------------------------------|----------------|----------------|
|                                            | 1995                           | 1996           | 1997           |
|                                            | \$m                            | \$m            | \$m            |
| ISSUED BY                                  |                                |                |                |
| Commonwealth public trading enterprises    | 7 693                          | 6 035          | 5 877          |
| State and local public trading enterprises | 1 953                          | 248            | 146            |
| Private trading enterprises                | 11 404                         | 12 726         | 20 695         |
| Banks                                      | 33 612                         | 38 402         | 48 035         |
| Non-bank deposit taking institutions       | 20 767                         | 23 973         | 25 748         |
| Other financial institutions               | 15 056                         | 17 594         | 25 067         |
| Commonwealth general government            | 95 427                         | 98 810         | 108 049        |
| State and local general government         | 83 549                         | 80 354         | 82 205         |
| <b>Total</b>                               | <b>269 461</b>                 | <b>278 142</b> | <b>315 822</b> |
| HELD BY                                    |                                |                |                |
| Commonwealth public trading enterprises    | 190                            | 31             | 96             |
| State and local public trading enterprises | 454                            | 452            | 752            |
| Private trading enterprises                | 225                            | 202            | 175            |
| Reserve Bank of Australia                  | 14 749                         | 11 943         | 20 188         |
| Banks                                      | 21 796                         | 20 815         | 24 144         |
| Non-bank deposit taking institutions       | 13 862                         | 13 818         | 10 140         |
| Life offices and superannuation funds      | 52 129                         | 51 755         | 52 767         |
| Other financial institutions               | 27 298                         | 24 645         | 25 523         |
| State and local general government         | 11 485                         | 8 654          | 6 956          |
| Households and unincorporated businesses   | 15 220                         | 17 269         | 17 324         |
| Rest of world                              | 112 053                        | 128 558        | 157 757        |
| <b>Total</b>                               | <b>269 461</b>                 | <b>278 142</b> | <b>315 822</b> |

Source: Australian National Accounts: Financial Accounts (5232.0).

## Foreign exchange market

The foreign exchange market is the means whereby currencies of different countries can be bought and sold. In October 1983, the Commonwealth Government decided to float the Australian dollar, allowing its value to be determined by market forces with few exchange controls and little Reserve Bank intervention. Prior to 1983, the Australian dollar was pegged to a basket of currencies which were weighted according to their trading significance to Australia. For further information regarding exchange rates, see the *Balance of Payments* section in *Chapter 30, International accounts and trade*. Table 26.18 shows the value of the Australian dollar against four major currencies at end June of the last three financial years.

## 26.18 VALUE OF AUSTRALIAN DOLLAR, Against Major Currencies

|                      | At 30 June |        |        |
|----------------------|------------|--------|--------|
|                      | 1995       | 1996   | 1997   |
| United States dollar | 0.7110     | 0.7855 | 0.7426 |
| United Kingdom pound | 0.4450     | 0.5064 | 0.4458 |
| German deutschmark   | 0.9798     | 1.1914 | 1.2912 |
| Japanese yen         | 59.91      | 85.53  | 84.96  |

Note: Rate given is the midpoint between the buying and selling rates.

Source: Average of Daily Exchange Rates (5654.0).

Currencies are traded for many reasons: because of exporting or importing requirements, investing or borrowing overseas, arbitraging (i.e., taking advantage of short-term discrepancies in rates) or speculating on possible exchange rate movements with a view to making a profit. Table 26.19 shows daily averages of foreign exchange turnover against all currencies.

**26.19 FOREIGN EXCHANGE TURNOVER  
AGAINST ALL CURRENCIES, Daily Averages(a)**

|                                             | 1994–95       | 1995–96       | 1996–97       |
|---------------------------------------------|---------------|---------------|---------------|
|                                             | \$m           | \$m           | \$m           |
| Transactions by foreign exchange dealers(b) |               |               |               |
| Outright spot(c)                            | 21 463        | 20 693        | 23 641        |
| Outright forward(d)                         | 1 882         | 2 014         | 2 495         |
| Swaps                                       | 26 527        | 28 437        | 35 390        |
| Options                                     | 792           | 968           | 1 442         |
| <b>Total</b>                                | <b>50 664</b> | <b>52 112</b> | <b>62 968</b> |

(a) Figures given are the average daily turnover for the financial year. (b) Australian banks and non-bank financial intermediaries authorised to deal in foreign exchange. (c) An outright spot transaction is one for receipt or delivery within two business days. (d) An outright forward transaction is one for receipt or delivery in more than two business days.

Source: Reserve Bank of Australia Bulletin, based on information supplied by foreign exchange dealers.

## Managed funds

The term *managed funds* is used loosely in the financial community to embrace two broad types of institutions. The first are collective investment

institutions (such as life insurance companies) which buy assets for their own account. The second are investment or fund managers which act as investment agents for the collective investment institutions as well as others with substantial funds to invest. Investment managers have small balance sheets because the assets they buy are on behalf of others. The significant growth in managed funds (see graph 26.20) has been a major development in the financial sector over the last decade.

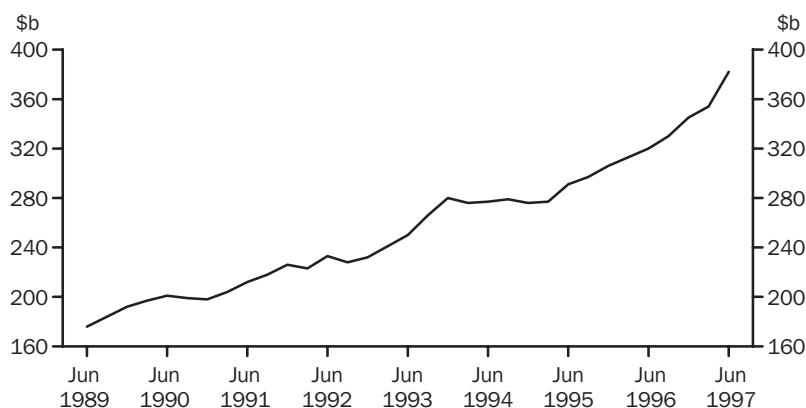
## Collective investment institutions

As the name implies, collective investment institutions pool the funds of many small investors and use them to buy a particular type or mix of assets. The asset profile can be structured to satisfy individual investor requirements regarding, for example, the degree of risk, the mix of capital growth and income, and the degree of asset diversification. Collective investment institutions comprise the following:

- Statutory funds of life insurance offices;
- Superannuation and approved deposit funds;
- Public unit trusts;
- Friendly societies;
- Common funds; and
- Cash management trusts.

Funds of a speculative nature that do not offer redemption facilities — for example, agricultural and film trusts — are excluded.

**26.20 TOTAL CONSOLIDATED ASSETS OF MANAGED FUNDS**



Source: Managed Funds, Australia (5655.0).

To derive the total assets of collective investment institutions in Australia on a consolidated basis, it is necessary to eliminate the cross investment between the various types of institution. For example, investments by superannuation funds in public unit trusts are excluded from the assets of superannuation funds in a consolidated presentation.

Although statistics for each of these institutions were presented earlier in this chapter, the accompanying tables summarise their consolidated position (i.e. after the cross investment between the institutions has been eliminated). Table 26.21 shows their assets by type of institution and table 26.22 shows assets by type of investment.

### Investment managers

A further development within the managed funds industry is the emergence of specialist investment managers. They are employed on a fee-for-service basis to manage and invest in approved assets on their clients' behalf. They usually act for the smaller collective investment institutions such as public unit trusts. They are

not accessible to the small investor. Investment managers provide a sophisticated level of service matching assets and liabilities. They act in the main as the managers of pooled funds, but also manage clients' investments on an individual portfolio basis.

A considerable proportion of the assets of collective investment institutions, particularly the statutory funds of life offices and assets of superannuation funds, is channelled through investment managers. At 30 June 1997, \$302,915m, or 72% of the unconsolidated assets of collective investment institutions, were channelled through investment managers. Table 26.23 shows the total unconsolidated assets of each type of collective investment institution and the amount of these assets invested through investment managers.

Investment managers also accept money from investors other than collective investment institutions. At 30 June 1997, investment managers invested \$55,457m on behalf of government bodies, general insurers and other clients, including overseas ones.

**26.21 ASSETS OF MANAGED FUNDS, By Type of Collective Investment Institution — 30 June 1997**

|                                 | Total          | Cross invested | Consolidated   |
|---------------------------------|----------------|----------------|----------------|
| Type of fund                    | \$m            | \$m            | \$m            |
| Statutory funds of life offices | 145 421        | 13 093         | 132 328        |
| Superannuation funds            | 185 795        | 20 211         | 165 584        |
| Public unit trusts              | 66 985         | 6 923          | 60 062         |
| Friendly societies              | 7 237          | 24             | 7 213          |
| Common funds                    | 5 812          | 81             | 5 713          |
| Cash management trusts          | 10 714         | —              | 10 714         |
| <b>Total</b>                    | <b>421 964</b> | <b>40 331</b>  | <b>381 633</b> |

Source: *Managed Funds, Australia* (5655.0).

**26.22 CONSOLIDATED ASSETS OF MANAGED FUNDS**

|                                | 30 June 1995   | 30 June 1996   | 30 June 1997   |
|--------------------------------|----------------|----------------|----------------|
| Type of investment             | \$m            | \$m            | \$m            |
| Deposits, loans and placements | 36 852         | 40 957         | 51 467         |
| Short-term debt securities     | 29 729         | 37 798         | 46 679         |
| Long-term debt securities      | 54 515         | 54 027         | 55 909         |
| Equities and units in trusts   | 79 487         | 89 060         | 111 974        |
| Land and buildings             | 37 267         | 40 070         | 44 068         |
| Overseas assets                | 44 020         | 46 741         | 59 397         |
| Other assets                   | 8 709          | 10 830         | 12 138         |
| <b>Total</b>                   | <b>290 576</b> | <b>319 482</b> | <b>381 633</b> |

Source: *Managed Funds, Australia* (5655.0).

**26.23 ASSETS OF MANAGED FUNDS, Invested through Investment Managers — 30 June 1997**

| Type of fund                              | Unconsolidated assets of<br>managed funds<br>\$m | Assets invested with<br>investment managers<br>\$m |
|-------------------------------------------|--------------------------------------------------|----------------------------------------------------|
| Statutory funds of life offices(a)        | 145 421                                          | 117 420                                            |
| Superannuation and approved deposit funds | 185 795                                          | 121 044                                            |
| Public unit trusts                        | 66 985                                           | 47 218                                             |
| Friendly societies                        | 7 237                                            | 5 559                                              |
| Common funds                              | 5 812                                            | 3 565                                              |
| Cash management trusts                    | 10 714                                           | 8 109                                              |
| <b>Total</b>                              | <b>421 964</b>                                   | <b>302 915</b>                                     |

(a) Includes both superannuation and ordinary business.

Source: *Managed Funds, Australia* (5655.0).

## Lending by financial institutions

The lending activities of financial institutions are grouped for statistical purposes into four major types of lending — housing, personal, commercial and leasing. Information regarding housing finance is presented in *Chapter 8, Housing*. Table 26.24 shows the size of commitments by financial institutions for the four types of lending. It should be noted that although commitments are firm offers of finance made by institutions that have been accepted by borrowers, not all commitments are taken up by borrowers.

**26.24 LENDING COMMITMENTS BY FINANCIAL INSTITUTIONS**

|                          | 1994-95        | 1995-96        | 1996-97        |
|--------------------------|----------------|----------------|----------------|
| Type of lending activity | \$m            | \$m            | \$m            |
| Housing finance          | 42 306         | 43 679         | 49 979         |
| Personal finance         | 28 514         | 32 282         | 35 568         |
| Commercial finance       | 104 332        | 139 334        | 154 271        |
| Lease finance            | 6 463          | 7 107          | 7 375          |
| <b>Total</b>             | <b>181 615</b> | <b>222 402</b> | <b>247 192</b> |

Source: See the tables which follow for each type of lending.

## Lease finance

The statistics in tables 26.25 and 26.26 measure lease finance commitments made by significant lenders (banks, money market corporations, finance companies, general financiers, etc.) to trading and financial enterprises, non-profit organisations, governments, public authorities and individuals.

**26.25 LEASE FINANCE COMMITMENTS, By Type of Lessor**

|                           | 1994-95      | 1995-96      | 1996-97      |
|---------------------------|--------------|--------------|--------------|
| Type of lessor            | \$m          | \$m          | \$m          |
| All banks                 | 1 923        | 2 394        | 2 676        |
| Money market corporations | 434          | 322          | 362          |
| Finance companies         | 3 006        | 3 266        | 3 192        |
| General financiers        | 1 101        | 1 126        | 1 146        |
| <b>Total</b>              | <b>6 463</b> | <b>7 107</b> | <b>7 375</b> |

Source: *Lease Finance, Australia* (5644.0.40.002).

**26.26 LEASE FINANCE COMMITMENTS, By Type of Good Leased**

|                                                          | 1994-95      | 1995-96      | 1996-97      |
|----------------------------------------------------------|--------------|--------------|--------------|
| Type of good                                             | \$m          | \$m          | \$m          |
| Motor vehicles and other transport equipment             | 3 992        | 4 215        | 4 215        |
| Construction and earth moving equipment                  | 325          | 352          | 366          |
| Agricultural machinery and equipment                     | 244          | 396          | 490          |
| Automatic data processing equipment and office machinery | 988          | 1 122        | 1 138        |
| Shop and office furniture, fittings and equipment        | 251          | 260          | 277          |
| Other goods                                              | 664          | 762          | 888          |
| <b>Total</b>                                             | <b>6 463</b> | <b>7 107</b> | <b>7 375</b> |

Source: *Lease Finance, Australia* (5644.0.40.002).

## Personal finance

Tables 26.27 and 26.28 present statistics of commitments made by significant lenders (banks, credit cooperatives, finance companies, etc.) to lend to individuals for their own personal (non-business) use. The revolving credit commitments provided in table 26.28 include commitments for overdrafts, credit cards and other personal revolving lines of credit.

**26.27 PERSONAL FINANCE COMMITMENTS, By Type of Lender(a)**

|                    | 1994-95       | 1995-96       | 1996-97       |
|--------------------|---------------|---------------|---------------|
| Type of lender     | \$m           | \$m           | \$m           |
| All banks          | 19 294        | 22 833        | 25 912        |
| Finance companies  | 5 197         | 5 318         | 5 391         |
| Credit cooperative | 2 769         | 3 043         | 3 222         |
| Other lenders(b)   | 1 254         | 1 088         | 1 043         |
| <b>Total</b>       | <b>28 514</b> | <b>32 282</b> | <b>35 568</b> |

(a) Includes both fixed loan facilities and new and increased lending commitments under revolving credit facilities.

(b) Includes permanent building societies, general financiers and retailers.

Source: *Personal Finance, Australia* (5642.0.40.002).

**26.28 PERSONAL FINANCE COMMITMENTS, By Type of Facility**

|                                               | 1994-95 | 1995-96 | 1996-97 |
|-----------------------------------------------|---------|---------|---------|
| Type of facility                              | \$m     | \$m     | \$m     |
| Fixed loan commitments                        |         |         |         |
| Fixed loans                                   | 18 623  | 20 931  | 20 931  |
| Revolving credit commitments                  |         |         |         |
| New and increased credit limits               | 9 891   | 11 351  | 14 441  |
| Cancellations and reductions in credit limits | 7 326   | 7 773   | 7 110   |
| Credit limits at 30 June                      |         |         |         |
| Total                                         | 40 524  | 44 402  | 51 587  |
| Used                                          | 16 767  | 18 047  | 21 358  |

Source: *Personal Finance, Australia* (5642.0.40.002).

## Commercial finance

The statistics in tables 26.29 and 26.30 measure commitments, made by significant lenders (banks, finance companies, money market corporations, etc.) to lend to government, private and public enterprises, non-profit organisations and individuals for investment and business purposes.

**26.29 COMMERCIAL FINANCE COMMITMENTS(a), By Type of Lender**

|                           | 1994-95        | 1995-96        | 1996-97        |
|---------------------------|----------------|----------------|----------------|
| Type of lender            | \$m            | \$m            | \$m            |
| All banks                 | 75 346         | 106 060        | 113 571        |
| Finance companies         | 7 527          | 7 676          | 7 786          |
| Money market corporations | 14 801         | 18 691         | 26 000         |
| Other lenders(b)          | 6 658          | 6 907          | 6 915          |
| <b>Total</b>              | <b>104 332</b> | <b>139 334</b> | <b>154 271</b> |

(a) Includes both fixed loan facilities and new and increased lending commitments under revolving credit facilities.

(b) Includes permanent building societies, general financiers and pastoral finance companies.

Source: *Commercial Finance, Australia* (5643.0.40.002).

**26.30 FIXED COMMERCIAL FINANCE COMMITMENTS, By Purpose**

|                                 | 1994-95       | 1995-96       | 1996-97       |
|---------------------------------|---------------|---------------|---------------|
| Purpose                         | \$m           | \$m           | \$m           |
| Construction                    | 5 254         | 6 576         | 7 435         |
| Purchase of real property       | 9 763         | 10 877        | 11 163        |
| Purchase of plant and equipment | 7 088         | 7 505         | 9 728         |
| Refinancing                     | 8 000         | 11 313        | 12 680        |
| Other purposes                  | 20 415        | 28 047        | 34 971        |
| <b>Total</b>                    | <b>50 520</b> | <b>64 317</b> | <b>75 976</b> |

Source: *Commercial Finance, Australia* (5643.0.40.002).

## Money and the payments system

The payments system supports trade and commerce in a market economy. Notes and coin are one means of payment. Liquid balances held at financial institutions are also available potentially for transactions needs, under cheque and other forms of transfer facilities, and thus add to the money supply. The payments system is under the management of the Australian Payments Clearing Association, a company operated jointly by system participants and supervisors.

## Money

Australia has a decimal system of currency, the unit being the dollar, which is divided into 100 cents. Australian notes are issued in the denominations of \$5, \$10, \$20, \$50 and \$100 and coins in the denominations of 5c, 10c, 20c, 50c, \$1 and \$2. \$1 and \$2 notes were replaced by coins in 1984 and 1988 respectively, and 1c and 2c coins ceased to be issued from 1 February



1992. Table 26.31 shows the value of notes on issue at the last Wednesday of June for the last three financial years. Table 26.32 shows the value of coin on issue at the same time points.

### 26.31 VALUE OF AUSTRALIAN NOTES ON ISSUE

|              | Last Wednesday in June |               |               |
|--------------|------------------------|---------------|---------------|
|              | 1995                   | 1996          | 1997          |
|              | \$m                    | \$m           | \$m           |
| \$1          | 20                     | 19            | 19            |
| \$2          | 49                     | 48            | 47            |
| \$5          | 332                    | 337           | 351           |
| \$10         | 614                    | 583           | 601           |
| \$20         | 1 848                  | 1 868         | 1 837         |
| \$50         | 7 193                  | 7 928         | 8 912         |
| \$100        | 8 482                  | 8 399         | 8 297         |
| <b>Total</b> | <b>18 538</b>          | <b>19 182</b> | <b>20 064</b> |
|              | %                      | %             | %             |
| Increase     | 5.5                    | 3.5           | 4.6           |

Source: Reserve Bank of Australia.

### 26.32 VALUE OF AUSTRALIAN DECIMAL COIN ON ISSUE

|              | Last Wednesday in June |                |                |
|--------------|------------------------|----------------|----------------|
|              | 1995                   | 1996           | 1997           |
|              | \$m                    | \$m            | \$m            |
| 1c           | 23.1                   | 22.8           | 22.6           |
| 2c           | 31.3                   | 30.7           | 30.3           |
| 5c           | 98.6                   | 102.6          | 106.8          |
| 10c          | 98.0                   | 97.5           | 98.8           |
| 20c          | 136.0                  | 138.7          | 142.7          |
| 50c          | 197.2                  | 204.8          | 210.3          |
| \$1          | 300.4                  | 328.0          | 351.8          |
| \$2          | 445.0                  | 468.9          | 492.0          |
| <b>Total</b> | <b>1 329.6</b>         | <b>1 394.0</b> | <b>1 455.1</b> |
|              | %                      | %              | %              |
| Increase     | 6.5                    | 4.8            | 4.4            |

Source: Reserve Bank of Australia.

## Money supply measures

The money supply, as measured and published by the Reserve Bank, refers to the amount of cash held by the public plus deposits with specified financial institutions. The measures range from the narrowest category, money base, through to the widest category, broad money, with other measures in between. The measures mainly used are as follows:

- *Money base*, which comprises holdings of notes and coin by the private sector, deposits by banks with the Reserve Bank, and other Reserve Bank liabilities to the private sector.
- *M3*, which is defined as currency plus bank deposits of the private non-bank sector.
- *Broad money*, which is defined as M3 plus borrowings from the private sector by non-bank financial intermediaries (including cash management trusts) less their holdings of currency and bank deposits.

The money supply under each of these measures at end June of the last three years is shown in table 26.33.

### 26.33 MONEY SUPPLY MEASURES

|             | June 1995 | June 1996 | June 1997 |
|-------------|-----------|-----------|-----------|
|             | \$m       | \$m       | \$m       |
| Money base  | 23 491    | 24 546    | 34 115    |
| M3          | 263 617   | 290 485   | 321 014   |
| Broad money | 317 014   | 349 389   | 383 307   |

Source: Reserve Bank of Australia.

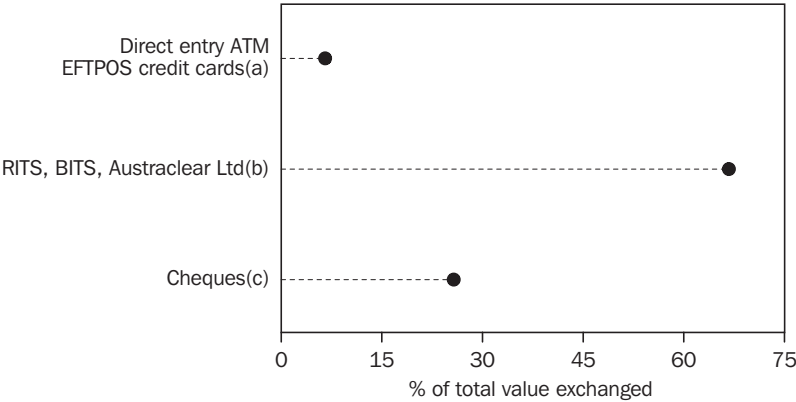
## Payments system

The implementation of real-time gross settlement (RTGS) for settling large claims between members of the clearing system is scheduled for full operation by April 1998. However substantial progress has been made with the implementation on 1 August 1997 of the High Value Clearing System (HVCS). It allows all holders of Reserve Bank settlement accounts (that is, all banks, building societies and credit unions) to settle large value payments through a system designed to process a high volume of transactions.

The settlement of payments on a RTGS basis, via the HVCS, will contribute substantially to the reduction of settlement risk and systemic risk in the Australian payments system.

Graph 26.34 shows that institutions in the payments clearing system (such as banks) accounted for most of the value exchanged in the Australian economy. Payment by cheque comes next, followed by use of Electronic Funds Transfer at Point of Sale (EFTPOS), Automatic Teller Machines (ATM) and credit cards.

26.34    MEANS OF PAYMENT USED FOR EXCHANGE, November 1996



(a) Based on 1996 survey figures and figures published by the Reserve Bank. (b) Reserve Bank Information and Transfer System (RITS), Bank Interchange Transfer System (BITS). Based on 1995 survey figures of items exchanged adjusted by an estimate of own items. (c) Based on 1996 survey figures.  
Source: Australian Payments Clearing Association Limited, Annual Report.

Table 26.35 highlights the growth of publicly available electronic access points into the payments system. The major growth has been in the number of EFTPOS terminals in Australia as more retailers provide a means to transfer funds electronically at the point of sale. This enables their customers to use debit cards as well as credit cards.

26.35    ELECTRONIC ACCESS POINTS

|                           | June 1995 | June 1996 | June 1997 |
|---------------------------|-----------|-----------|-----------|
|                           | no.       | no.       | no.       |
| Automatic teller machines | 6 249     | 7 178     | 8 182     |
| EFTPOS terminals          | 62 975    | 107 702   | 164 200   |

Source: Australian Payments Clearing Association Limited, Annual Report.

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## Introduction

The main functions of government are the provision of non-market services, the regulation of economic and social conditions and the redistribution of income between sections of the community. These activities are primarily financed by taxation and are carried out by entities in the general government sector. In addition to this core activity, governments can also own or control agencies which sell goods or services to the public and which operate largely on a commercial (or market) basis. Historically, these public trading enterprises and public financial enterprises were set up by governments to create new industries, to foster competition and to allow governments to influence pricing policy.

The statistics in this chapter measure the activity of the non-financial public sector, which comprises general government entities, and public trading enterprises, which provide goods and non-financial services. The non-financial public sector is sometimes referred to as the 'government' sector, but this is technically incorrect because it currently excludes government financial enterprises.

The Australian system of Government Finance Statistics (GFS) is used to derive the statistics presented in this chapter. GFS focuses on financial transactions such as governments' spending, lending, taxing and borrowing activities, and reflects the impact of these transactions on other sectors of the economy. GFS comprises both cash (for general government) and accrual (for public trading enterprises) methods of recording transactions, and is based on international standards specified in the International Monetary Fund's *A Manual on Government Finance Statistics* and the United Nations' *A System of National Accounts* (SNA).

## Public sector

The public sector comprises all organisations owned or controlled by any of the three levels of government within the Australian political system:

- Commonwealth;
- State/Territory; and
- local.

It can be divided into the institutional sectors described below, based on the characteristics of the organisations it comprises. These sectors are:

- *General government.* The principal function of general government entities is to provide non-market goods and services (e.g. roads, hospitals, libraries) primarily financed by taxes, to regulate and influence economic activity, to maintain law and order and to redistribute income by means of transfer payments.

This institutional sector covers the departments of the Commonwealth Government, State Governments and local government municipalities. It also includes agencies and government authorities under departmental administration which are engaged in the provision of public administration, defence, law enforcement, welfare, public education and health. Also included are non-departmental bodies which independently perform the government functions of regulation (e.g. Nurses Registration Boards and the Maritime Safety Authority), provision of non-market services (e.g. the Australian Broadcasting Corporation) and redistribution of income (e.g. the Aboriginal and Torres Strait Islander Commission). Some of these bodies may be corporations, but they are still considered part of the general government sector if they perform general government functions.

Unincorporated government enterprises which provide goods and services to their governments and to the public at prices that are not economically significant (such as cafeterias for government employees, and municipal swimming pools) are also included in this sector. In addition, government quasi-corporations which sell their output exclusively to other government units (whether or not they charge market prices), such as government printers and munitions factories, are classified as general government units.

- *Public trading enterprises.* The main function of public trading enterprises is to provide goods and services which are predominantly market, non-regulatory and non-financial in nature and financed through sales to consumers of these goods and services.

Enterprises in the public trading enterprises sector differ from those in the general government sector in that all or most of the

production costs are recovered from consumers, rather than being financed through the general taxation revenue of government. Some enterprises, however, do receive subsidies to make up for shortfalls incurred as a result of government policy, for example, in the provision of 'community service obligations' at concessional rates.

Public trading enterprises vary in their degree of 'commerciality', from those which are quite heavily reliant on parent governments for subsidies, such as rail and bus transport undertakings, to those which are net contributors to government revenue. Governments may exercise control over public trading enterprises by either owning more than 50% of the voting stock or otherwise controlling more than half the shareholders' voting power, or through legislation, decree or regulation which empowers the government to determine corporate policy or to appoint the directors. Examples of public trading enterprises are Telstra, Australia Post, State Rail and local electricity, bus and transport operations.

- *Public financial enterprises.* These are government owned or controlled enterprises which engage in financial intermediation (i.e. trade in financial assets and liabilities), such as government banks and insurance offices, or home lending schemes.

Public financial enterprises are currently excluded from GFS because these enterprises have a separate and distinct role in the economy. They are included, along with the equivalent private sector enterprises, in statistics which highlight the distinct features of financial intermediation activity (see *Chapter 26, Financial System*).

The Australian GFS system presents statistics relating to:

- consolidated transactions of the various non-financial public authorities, presented so that the economic impact of government activity can be assessed;
- transactions of the different levels of government, reflecting their different roles in

undertaking and financing their expenditure programs;

- transactions of each government jurisdiction, so that the statistics can be used to indicate the comparative standing of each government jurisdiction in terms of its expenditure, its sources of revenue, and its financing transactions; and
- transactions presented to identify the purposes that are being served by government expenditure programs.

To assist users, *Government Finance Statistics Australia, Concepts, Sources and Methods* (5514.0) outlines the major concepts, provides definitions of the statistical units and contains the main classifications employed. The GFS classifications applied in the tables in this chapter are:

- the Economic Transactions Framework (ETF) which categorises outlays, revenue and grants received and financing according to their economic character, to facilitate the study of the macroeconomic effect of government activity;
- the Government Purpose Classification (GPC) which classifies outlays according to the purpose or function served; and
- the Taxes, Fees and Fines Classification (TFFC) which classifies this major form of government revenue according to type of tax, fee or fine collected.

## General government output as a percentage of GDP

Despite the fact that most goods and services provided by general government bodies are not normally sold, their output is still regarded as part of production. The output of government is valued at cost and comprises total final consumption expenditure (principally wages and salaries paid to the employees of general government bodies and the cost of purchased goods and services used), plus an allowance for the consumption of fixed capital. Table 27.1 shows general government's share of GDP for the years 1991–92 to 1995–96.



## 27.1 GENERAL GOVERNMENT OUTPUT AS A PERCENTAGE OF GDP(a)

|                            | 1991–92     | 1992–93     | 1993–94     | 1994–95     | 1995–96     |
|----------------------------|-------------|-------------|-------------|-------------|-------------|
| Sector                     | %           | %           | %           | %           | %           |
| Commonwealth               | 6.0         | 6.2         | 6.2         | 6.1         | 6.1         |
| State, Territory and local | 13.1        | 13.1        | 13.1        | 13.1        | 13.3        |
| <b>Total</b>               | <b>19.2</b> | <b>19.3</b> | <b>19.2</b> | <b>19.2</b> | <b>19.5</b> |

(a) The expenditure based estimates of GDP and the estimates for consumption of fixed capital used in the above calculations are from Australian National Accounts: National Income, Expenditure and Product, 1995–96 (5204.0).

Source: Government Finance Statistics, Australia 1995–96 (5512.0).

## Deficit

In GFS, the deficit/surplus reflects the balance between government outlays and government revenue. It measures the extent to which government is increasing (surplus) or decreasing (deficit) its net financial position.

The additional deficit measure ‘deficit adjusted for net advances’ has been introduced into GFS statistics. This measure excludes the effects of equity sales and injections, and refinancing of State debt to the Commonwealth. In the ABS view, this measure provides a better guide to government fiscal policies.

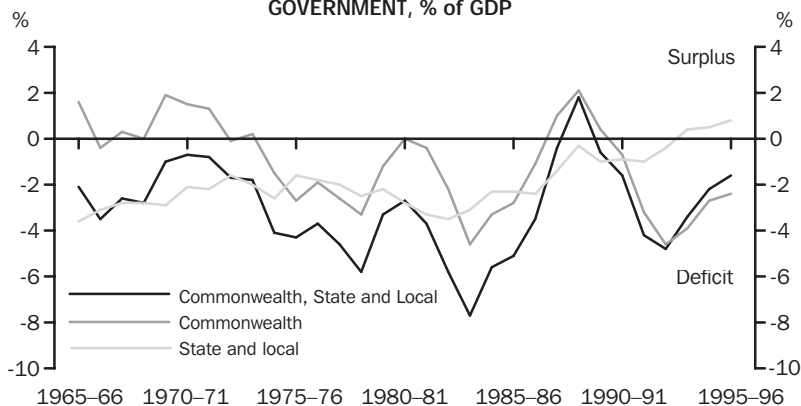
Graph 27.2 shows the movements in the deficit adjusted for net advances (‘adjusted deficit’) as a percentage of the income based measure of GDP (GDP(I)) from 1965–66 to 1995–96 for the Commonwealth Government, for the State/Territory and local levels of government combined, and for all levels of government combined.

The graph demonstrates that the general government adjusted deficit for all levels of government combined shows a strong cyclical pattern, which is mainly driven by the Commonwealth Government. It is also evident that, over the period shown in the graph, there has been a reduction in the average level of adjusted deficits for State/Territory and local governments, which has been offset by an increase in the average level of adjusted deficit for the Commonwealth Government.

## Government sector’s contribution to national saving

The deficit is split between the current deficit and the capital deficit. The current deficit, which is a cash-based measure of government saving, is measured by subtracting current outlays from revenue plus increase in provisions less capital grants and other capital revenue. Refer to *Chapter 29, National Accounts* for further details relating to general government saving.

27.2 GENERAL GOVERNMENT ADJUSTED DEFICIT FOR ALL LEVELS OF GOVERNMENT, % of GDP



Source: Government Finance Statistics, Australia 1995–96 (5512.0).

## Finance of all levels of government combined

The outlays, revenue and financing transactions of the general government and public trading enterprise sectors for all levels of government combined are shown in tables 27.3 and 27.4. Table 27.5 shows a dissection of taxes, fees and fines, the largest component of government revenue.

In 1995–96, outlays for the general government sector for Australia totalled \$165,154m, a 1.5% increase over the 1994–95 result of \$162,757m. Outlays for the public trading enterprise sector fell from \$21,083m in 1994–95 to \$11,872m in 1995–96, mainly due to equity asset sales by the Victorian Government. Outlays of public trading enterprises comprise mainly capital expenditures, interest payments and transfers to government, and do not include operating expenditure, which is offset against revenue.

General government total revenue increased by 10.2% from \$151,510m in 1994–95 to \$166,945m in 1995–96. The proportion of general government total revenue raised from taxes, fees and fines for 1995–96 was 91.4%.

Public trading enterprise revenue fell by 7.2% from \$16,233m in 1994–95 to \$15,066m in 1995–96, due in part to privatisation of public trading enterprises. The predominant source of public trading enterprise revenue is the net operating surplus of enterprises, which comprises operating revenue less operating

expenditure. This item contributed 76.1% of public trading enterprise revenue in 1995–96.

The general government sector moved from a deficit of \$12,312m in 1994–95 to a surplus of \$796m in 1995–96. The current deficit moved from a deficit of \$2,740m in 1994–95 to a surplus of \$2,509m in 1995–96, reflecting higher revenue from taxation. The capital deficit fell from \$9,573m in 1994–95 to \$1,713m in 1995–96, reflecting lower capital outlays during 1995–96, primarily resulting from significant asset sales in that year. The adjusted deficit, which excludes equity asset sales, for the general government sector for all levels of government combined was \$8,211m in 1995–96, a drop of \$5,731m over the previous year's figure of \$13,582m.

The deficit adjusted for net advances for the public trading enterprise sector for all levels of government combined was in surplus by \$449m in 1995–96, compared to a surplus of \$3,714m in 1994–95.

The outlays, revenue and deficit/surplus of each level of government are not additive, as financial transactions may occur between the Commonwealth Government, State/Territory Governments and local governments. For example, grants are paid by the Commonwealth Government to State Governments or local governments (either directly or via the State for onpassing), interest is paid and advances are made across the three levels.

## 27.3 ECONOMIC TRANSACTIONS OF ALL LEVELS OF GOVERNMENT, General Government

|                                                 | 1990–91        | 1991–92        | 1992–93        | 1993–94        | 1994–95        | 1995–96        |
|-------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                                 | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| <b>Outlays</b>                                  |                |                |                |                |                |                |
| Current outlays                                 |                |                |                |                |                |                |
| Current expenditure                             | 70 781         | 75 516         | 79 046         | 82 603         | 85 593         | 90 456         |
| Less sales of goods and services(a)             | 10 686         | 11 357         | 12 110         | 13 159         | 13 682         | 14 429         |
| Final consumption expenditure                   | 60 095         | 64 159         | 66 936         | 69 444         | 71 911         | 76 027         |
| Interest payments                               | 12 085         | 11 396         | 11 437         | 12 854         | 14 267         | 15 426         |
| Subsidies paid to PTEs                          | 3 677          | 3 201          | 2 862          | 2 879          | 2 556          | 2 484          |
| Personal benefit payments                       | 37 454         | 42 549         | 46 283         | 49 902         | 51 966         | 55 871         |
| Other transfer payments                         | 7 481          | 9 052          | 10 468         | 11 312         | 12 209         | 13 235         |
| Total current outlays                           | 120 791        | 130 358        | 137 985        | 146 391        | 152 910        | 163 043        |
| Capital outlays                                 |                |                |                |                |                |                |
| Expenditure on new fixed assets                 | 9 454          | 9 502          | 10 191         | 9 754          | 10 095         | 10 341         |
| Plus expenditure on second-hand assets (net)    | -687           | -695           | -1 000         | -1 144         | -1 085         | -1 563         |
| Gross fixed capital expenditure                 | 8 768          | 8 807          | 9 191          | 8 610          | 9 011          | 8 778          |
| Expenditure on land and intangible assets (net) | -105           | -71            | -294           | -580           | -456           | -190           |
| Capital grants to                               |                |                |                |                |                |                |
| Other sectors                                   | 715            | 913            | 642            | 609            | 482            | 509            |
| Public trading enterprises                      | 1 734          | 1 895          | 2 022          | 2 141          | 2 077          | 1 959          |
| Total capital grants                            | 2 449          | 2 808          | 2 664          | 2 751          | 2 559          | 2 468          |
| Advances paid (net) to                          |                |                |                |                |                |                |
| Public financial enterprises                    | -68            | 2 114          | 481            | -1 158         | -98            | -262           |
| Public trading enterprises                      | -1 020         | 180            | -81            | -676           | -198           | -6 248         |
| Abroad                                          | 195            | 181            | 170            | 150            | 138            | 266            |
| Other                                           | 348            | -33            | -1 475         | -2 681         | -1 111         | -2 762         |
| Total advances                                  | -545           | 2 443          | -905           | -4 365         | -1 269         | -9 007         |
| Other capital outlays                           | 23             | -8             | 12             | 17             | 3              | 62             |
| Total capital outlays                           | 10 590         | 13 979         | 10 668         | 6 433          | 9 847          | 2 111          |
| <b>Total outlays</b>                            | <b>131 381</b> | <b>144 336</b> | <b>148 653</b> | <b>152 824</b> | <b>162 757</b> | <b>165 154</b> |
| <b>Revenue</b>                                  |                |                |                |                |                |                |
| Taxes, fees and fines                           | 119 179        | 115 627        | 118 722        | 126 119        | 139 257        | 152 557        |
| Interest received from PTEs                     | 1 437          | 1 296          | 1 046          | 938            | 889            | 626            |
| Interest received                               | 4 198          | 3 526          | 3 263          | 3 138          | 3 458          | 3 814          |
| Other revenue                                   | 4 536          | 6 113          | 6 899          | 9 488          | 7 906          | 9 948          |
| <b>Total revenue</b>                            | <b>129 350</b> | <b>126 562</b> | <b>129 931</b> | <b>139 683</b> | <b>151 510</b> | <b>166 945</b> |
| <b>Financing and deficit measures</b>           |                |                |                |                |                |                |
| Borrowing (net)                                 | 7 300          | 20 815         | 23 603         | 19 622         | 12 852         | -3 694         |
| Increase in provisions                          | -849           | -1 014         | -1 289         | -1 152         | -1 065         | -995           |
| Other financing transactions                    | -4 420         | -2 026         | -3 591         | -5 329         | -540           | 2 898          |
| Total financing and deficit measures            | 2 031          | 17 774         | 18 723         | 13 141         | 11 247         | -1 791         |
| Less increase in provisions                     | -849           | -1 014         | -1 289         | -1 152         | -1 065         | -995           |
| <b>Deficit</b>                                  | <b>2 880</b>   | <b>18 789</b>  | <b>20 012</b>  | <b>14 293</b>  | <b>12 312</b>  | <b>-796</b>    |
| of which                                        |                |                |                |                |                |                |
| Current deficit(b)                              | -7 538         | 4 960          | 9 528          | 8 174          | 2 740          | -2 509         |
| Capital deficit(c)                              | 10 419         | 13 828         | 10 484         | 6 119          | 9 573          | 1 713          |
| Less advances paid (net)                        | -545           | 2 443          | -905           | -4 365         | -1 269         | -9 007         |
| <b>Deficit adjusted for net advances(d)</b>     | <b>3 425</b>   | <b>16 346</b>  | <b>20 918</b>  | <b>18 658</b>  | <b>13 582</b>  | <b>8 211</b>   |

(a) This item provides an indication of the extent of government charges levied. The charges (excluding inter-agency charges) are offset against gross expenditure in calculating final consumption expenditure and mainly comprise sales to the private sector.

(b) Revenue less current outlays plus increase in provisions less capital grants and other capital revenue. (c) Capital grants and other capital revenue less capital outlays. (d) This is defined as the cash-based deficit/surplus less net advances paid. Net advances paid include equity sales and repayment of past policy lending, less equity injections/purchases and new policy lending.

Source: Government Finance Statistics, Australia 1995–96 (5512.0).

## 27.4 ECONOMIC TRANSACTIONS OF ALL LEVELS OF GOVERNMENT, Public Trading Enterprises

|                                                 | 1990-91       | 1991-92       | 1992-93       | 1993-94       | 1994-95       | 1995-96        |
|-------------------------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|
|                                                 | \$m           | \$m           | \$m           | \$m           | \$m           | \$m            |
| <b>Outlays</b>                                  |               |               |               |               |               |                |
| Current outlays                                 |               |               |               |               |               |                |
| Interest payments to                            |               |               |               |               |               |                |
| General government                              | 1 439         | 1 295         | 1 054         | 937           | 880           | 610            |
| Other enterprises                               | 7 522         | 7 030         | 6 026         | 5 246         | 5 096         | 4 515          |
| Total interest payments                         | 8 962         | 8 325         | 7 080         | 6 183         | 5 976         | 5 125          |
| Income transferred to general government        | 1 408         | 1 791         | 1 912         | 3 397         | 3 435         | 4 662          |
| Other transfer payments                         | 598           | 1 103         | 1 671         | 1 456         | 1 321         | 1 738          |
| Total current outlays                           | 10 967        | 11 218        | 10 663        | 11 036        | 10 731        | 11 525         |
| Capital outlays                                 |               |               |               |               |               |                |
| Expenditure on new fixed assets                 | 12 573        | 12 019        | 11 394        | 10 929        | 11 885        | 11 412         |
| Plus expenditure on second-hand assets (net)    | -1 356        | -917          | -1 517        | -1 790        | -844          | -1 030         |
| Gross fixed capital expenditure                 | 11 217        | 11 103        | 9 878         | 9 139         | 11 041        | 10 382         |
| Expenditure on land and intangible assets (net) | 207           | 123           | 70            | -320          | -240          | -97            |
| Capital grants to                               |               |               |               |               |               |                |
| Other sectors                                   | 36            | 20            | 38            | 45            | 59            | 56             |
| Other levels of government                      | 5             | —             | 45            | 52            | 28            | 10             |
| Total capital grants                            | 42            | 20            | 84            | 96            | 86            | 65             |
| Advances paid (net)                             | -223          | -214          | -213          | -182          | 14            | -10 004        |
| Other capital outlays                           | 1 121         | -367          | 346           | -605          | -550          | —              |
| Total capital outlays                           | 12 363        | 10 665        | 10 164        | 8 128         | 10 352        | 347            |
| <b>Total outlays</b>                            | <b>23 330</b> | <b>21 883</b> | <b>20 827</b> | <b>19 164</b> | <b>21 083</b> | <b>11 872</b>  |
| <b>Revenue</b>                                  |               |               |               |               |               |                |
| Sales of goods and services                     | 57 485        | 60 221        | 62 271        | 68 391        | 71 105        | 67 423         |
| Plus subsidies received                         | 3 831         | 3 076         | 2 874         | 2 921         | 2 586         | 2 611          |
| Less operating expenditure                      | 50 006        | 52 436        | 53 595        | 58 228        | 61 556        | 58 562         |
| Net operating surplus                           | 11 310        | 10 862        | 11 550        | 13 085        | 12 136        | 11 472         |
| Interest received                               | 1 488         | 1 133         | 776           | 584           | 840           | 853            |
| Capital grants received                         | 1 699         | 1 936         | 2 059         | 2 175         | 2 098         | 1 961          |
| Other revenue                                   | 722           | 787           | 764           | 937           | 1 158         | 780            |
| <b>Total revenue</b>                            | <b>15 220</b> | <b>14 718</b> | <b>15 149</b> | <b>16 781</b> | <b>16 233</b> | <b>15 066</b>  |
| <b>Financing and deficit measures</b>           |               |               |               |               |               |                |
| Advances received (net)                         | -1 021        | 170           | -133          | -680          | -190          | -6 238         |
| Borrowing (net)                                 | 4 090         | 388           | -424          | -3 385        | -3 365        | -4 867         |
| Increase in provisions (net)                    |               |               |               |               |               |                |
| Depreciation                                    | 5 609         | 7 450         | 7 119         | 7 113         | 7 628         | 6 980          |
| Other                                           | 109           | 61            | 221           | -537          | 923           | 278            |
| Total increase in provisions                    | 5 718         | 7 511         | 7 340         | 6 576         | 8 551         | 7 258          |
| Other financing transactions (net)              | -675          | -904          | -1 105        | -129          | -145          | 653            |
| <b>Total financing and deficit measures</b>     | <b>8 111</b>  | <b>7 165</b>  | <b>5 679</b>  | <b>2 383</b>  | <b>4 851</b>  | <b>-3 194</b>  |
| Less Increase in provisions                     | 5 718         | 7 511         | 7 340         | 6 576         | 8 551         | 7 258          |
| <b>Deficit</b>                                  | <b>2 393</b>  | <b>-346</b>   | <b>-1 662</b> | <b>-4 193</b> | <b>-3 700</b> | <b>-10 452</b> |
| of which                                        |               |               |               |               |               |                |
| Current deficit                                 | -7 597        | -8 321        | -9 049        | -9 318        | -10 925       | -8 148         |
| Capital deficit                                 | 9 990         | 7 976         | 7 387         | 5 125         | 7 225         | -2 305         |
| Less Advances paid (net)                        | -223          | -214          | -213          | -182          | 14            | -10 004        |
| <b>Deficit adjusted for net advances</b>        | <b>2 616</b>  | <b>-132</b>   | <b>-1 448</b> | <b>-4 011</b> | <b>-3 714</b> | <b>-449</b>    |

Source: Government Finance Statistics, Australia 1995-96 (5512.0).

## 27.5 TAXES, FEES AND FINES OF ALL LEVELS OF GOVERNMENT

|                                                                  | 1990–91        | 1991–92        | 1992–93        | 1993–94        | 1994–95        | 1995–96        |
|------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                                                  | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| <b>Taxes on income</b>                                           |                |                |                |                |                |                |
| Income taxes levied on individuals                               | 50 156         | 46 830         | 47 528         | 50 571         | 54 635         | 60 602         |
| Income taxes levied on enterprises                               | 15 227         | 14 494         | 15 049         | 13 939         | 17 415         | 19 280         |
| Income taxes levied on non-residents                             | 1 095          | 903            | 827            | 1 008          | 1 060          | 1 489          |
| <i>Total taxes on income</i>                                     | <i>66 478</i>  | <i>62 227</i>  | <i>63 404</i>  | <i>65 518</i>  | <i>73 109</i>  | <i>81 370</i>  |
| <b>Employers' payroll taxes</b>                                  |                |                |                |                |                |                |
| General taxes (payroll tax)                                      | 5 802          | 5 904          | 5 800          | 6 015          | 6 560          | 7 069          |
| Selective taxes (stevedoring industry charges)                   | 51             | 54             | 45             | 40             | 64             | 14             |
| Other employers' labour force taxes                              | 1 207          | 1 288          | 1 305          | 1 381          | 2 691          | 2 965          |
| <i>Total employers' payroll taxes</i>                            | <i>7 059</i>   | <i>7 247</i>   | <i>7 150</i>   | <i>7 435</i>   | <i>9 315</i>   | <i>10 047</i>  |
| <b>Taxes on property</b>                                         |                |                |                |                |                |                |
| Taxes on immovable property(a)                                   | 6 149          | 6 533          | 6 698          | 6 718          | 6 748          | 6 974          |
| Taxes on financial and capital transactions                      | 4 279          | 4 479          | 4 901          | 6 010          | 5 920          | 6 153          |
| <i>Total taxes on property</i>                                   | <i>10 429</i>  | <i>11 012</i>  | <i>11 600</i>  | <i>12 728</i>  | <i>12 669</i>  | <i>13 127</i>  |
| <b>Taxes on provision of goods and services</b>                  |                |                |                |                |                |                |
| General taxes (sales tax)                                        | 9 365          | 9 113          | 9 252          | 10 414         | 11 624         | 12 970         |
| Excises and levies                                               |                |                |                |                |                |                |
| Crude oil and LPG(b)                                             | 1 354          | 64             | 116            | 62             | 27             | 13             |
| Other excises                                                    | 9 005          | 9 417          | 9 560          | 10 751         | 11 973         | 12 835         |
| Agricultural production taxes                                    | 1 238          | 735            | 633            | 647            | 692            | 669            |
| Levies on statutory authorities                                  | 378            | 423            | 469            | 491            | 523            | 484            |
| Total excises and levies                                         | 11 975         | 10 639         | 10 778         | 11 951         | 13 215         | 14 002         |
| Taxes on international trade                                     | 3 377          | 3 350          | 3 336          | 3 231          | 3 479          | 3 129          |
| Taxes on gambling                                                | 1 946          | 2 018          | 2 236          | 2 583          | 2 967          | 3 316          |
| Taxes on insurance                                               | 1 176          | 1 298          | 1 430          | 1 574          | 1 659          | 1 734          |
| <i>Total taxes on provision of goods and services</i>            | <i>27 839</i>  | <i>26 418</i>  | <i>27 032</i>  | <i>29 754</i>  | <i>32 943</i>  | <i>35 151</i>  |
| <b>Taxes on use of goods and performance of activities</b>       |                |                |                |                |                |                |
| Motor vehicle taxes                                              | 2 368          | 2 493          | 2 802          | 3 130          | 3 391          | 3 511          |
| Franchise taxes                                                  | 2 620          | 2 842          | 3 394          | 3 999          | 4 197          | 4 903          |
| Other taxes on use of goods and performance of activities        | 184            | 254            | 265            | 439            | 444            | 638            |
| <i>Total taxes on use of goods and performance of activities</i> | <i>5 171</i>   | <i>5 589</i>   | <i>6 461</i>   | <i>7 569</i>   | <i>8 033</i>   | <i>9 053</i>   |
| <b>Fees and fines</b>                                            |                |                |                |                |                |                |
| Compulsory fees                                                  | 1 556          | 1 766          | 1 699          | 1 707          | 1 880          | 2 019          |
| Fines                                                            | 458            | 537            | 541            | 541            | 529            | 572            |
| <i>Total fees and fines</i>                                      | <i>2 014</i>   | <i>2 303</i>   | <i>2 240</i>   | <i>2 248</i>   | <i>2 409</i>   | <i>2 591</i>   |
| <b>Total taxes, fees and fines(c)</b>                            | <b>118 990</b> | <b>114 796</b> | <b>117 887</b> | <b>125 253</b> | <b>138 477</b> | <b>151 339</b> |
| Income taxes paid by public trading enterprises                  | 189            | 831            | 836            | 866            | 779            | 1 218          |

(a) Partly estimated. (b) Oil produced (except from the North West Shelf production licence area) is not subject to crude oil excise duties from 1991–92 onwards. Amounts collected under petroleum resource rent taxes are included in company income tax.

(c) Excludes income taxes paid by public trading enterprises.

Source: Government Finance Statistics, Australia 1995–96 (5512.0).

## Outlays by purpose

The Government Purpose Classification (GPC) is designed to identify the purposes for which government outlays are made. In conjunction with the Economic Transactions Framework (ETF), it provides information for the study of the socio-economic effects of government transactions. Outlays on social security and

welfare, for example, rose 7.0% from \$46,320m in 1994–95 to \$49,534m in 1995–96 and comprised 29.3% of total government outlays. Table 27.6 shows a time series of outlays by purpose, for the three levels of government combined.

## 27.6 CONSOLIDATED OUTLAYS OF ALL LEVELS OF GOVERNMENT, By Purpose(a)

|                                              | 1990-91        | 1991-92        | 1992-93        | 1993-94        | 1994-95        | 1995-96        |
|----------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                              | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| General public services                      | 11 581         | 14 675         | 13 287         | 13 824         | 13 764         | 12 270         |
| Defence                                      | 8 326          | 8 607          | 9 010          | 9 237          | 9 147          | 9 394          |
| Public order and safety                      | 5 347          | 5 630          | 5 641          | 5 798          | 6 224          | 6 745          |
| Education                                    |                |                |                |                |                |                |
| Primary and secondary education              | 10 781         | 11 591         | 11 952         | 12 173         | 12 466         | 13 155         |
| Tertiary education                           | 6 212          | 6 916          | 7 423          | 7 834          | 7 995          | 8 366          |
| of which                                     |                |                |                |                |                |                |
| University education                         | 4 143          | 4 675          | 4 987          | 5 340          | 5 429          | 5 728          |
| Technical and further education              | 2 070          | 2 241          | 2 436          | 2 494          | 2 566          | 2 638          |
| Other education                              | 1 956          | 1 946          | 2 116          | 2 079          | 2 174          | 2 257          |
| Total education                              | 18 950         | 20 453         | 21 491         | 22 086         | 22 635         | 23 778         |
| Health                                       |                |                |                |                |                |                |
| Hospital and other institutional services    | 12 308         | 12 643         | 12 882         | 12 896         | 13 198         | 14 241         |
| Clinics and other non-institutional services | 934            | 1 142          | 1 269          | 1 363          | 1 812          | 1 972          |
| Other health                                 | 6 997          | 7 517          | 8 296          | 9 145          | 10 002         | 10 954         |
| Total health                                 | 20 240         | 21 302         | 22 447         | 23 404         | 25 013         | 27 168         |
| Social security and welfare                  |                |                |                |                |                |                |
| Social security                              | 28 106         | 32 660         | 35 513         | 38 554         | 39 815         | 42 575         |
| Welfare services                             | 3 589          | 4 013          | 4 463          | 4 629          | 5 006          | 5 398          |
| Other social security and welfare            | 1 210          | 1 453          | 1 338          | 1 429          | 1 499          | 1 562          |
| Total social security and welfare            | 32 904         | 38 127         | 41 314         | 44 613         | 46 320         | 49 534         |
| Housing and community amenities              |                |                |                |                |                |                |
| Housing and community development            | 1 826          | 1 751          | 1 785          | 1 297          | 2 357          | 1 962          |
| Water supply                                 | 863            | 920            | 828            | 707            | 927            | 862            |
| Sanitation and protection of the environment | 1 672          | 1 642          | 1 657          | 1 575          | 1 688          | 1 821          |
| Other community amenities                    | 230            | 264            | 360            | 305            | 315            | 349            |
| Total housing and community amenities        | 4 591          | 4 577          | 4 629          | 3 884          | 5 286          | 4 995          |
| Recreation and culture                       |                |                |                |                |                |                |
| Recreational facilities and services         | 1 723          | 1 929          | 2 054          | 2 096          | 1 231          | 2 374          |
| Cultural facilities and services             | 919            | 931            | 933            | 1 141          | 1 348          | 1 467          |
| Broadcasting and film production             | 801            | 768            | 753            | 579            | 712            | 781            |
| Other recreation and culture                 | 226            | 227            | 262            | 113            | 183            | 112            |
| Total recreation and culture                 | 3 669          | 3 856          | 4 002          | 3 929          | 3 473          | 4 734          |
| Fuel and energy(b)                           | 3 219          | 3 370          | 2 620          | 1 681          | 3 359          | -7 479         |
| Agriculture, forestry, fishing and hunting   | 5 072          | 2 742          | 3 435          | 2 443          | 2 105          | 3 193          |
| Mining, manufacturing, construction etc.     | 883            | 897            | 728            | 549            | 539            | 759            |
| Transport and communications                 |                |                |                |                |                |                |
| Road transport                               | 5 807          | 5 731          | 6 537          | 4 931          | 6 113          | 6 796          |
| Water transport                              | 488            | 460            | 367            | 529            | 363            | 223            |
| Rail and multi-mode transport                | 2 316          | 2 532          | 2 739          | 3 414          | 3 129          | 3 069          |
| Air transport(c)                             | 1 954          | 2 249          | 634            | 805            | 1 300          | -574           |
| Other transport                              | 103            | 42             | 55             | -383           | -251           | 36             |
| Communications                               | 3 017          | 2 025          | 2 882          | 2 459          | 3 564          | 4 044          |
| Total transport and communications           | 13 685         | 13 039         | 13 213         | 11 755         | 14 220         | 13 594         |
| Other economic affairs                       | 3 012          | 3 716          | 4 801          | 4 864          | 5 136          | 5 527          |
| Other purposes                               | 19 290         | 19 035         | 16 860         | 17 067         | 19 390         | 20 364         |
| <b>Total</b>                                 | <b>150 768</b> | <b>160 027</b> | <b>163 480</b> | <b>165 134</b> | <b>176 610</b> | <b>174 574</b> |

(a) Due to transactions between sectors, consolidated totals are not always the sum of totals for the general government and public trading enterprise sectors. (b) Negative outlays in this category in 1995-96 are due to electricity asset sales during that year.

(c) The negative outlays in 1995-96 are due to the sale of the Commonwealth's remaining 75% equity interest in Qantas Airways Limited.

Source: Government Finance Statistics, Australia 1995-96 (5512.0).

## Commonwealth government finance

The Commonwealth Government has exclusive responsibility under the Constitution for the administration of a wide range of functions including defence, foreign affairs and trade, and immigration. A distinctive feature of the Australian federal system is that the Commonwealth Government levies and collects all income tax, from individuals as well as from enterprises. It also collects a significant portion of other taxes, including taxes on the provision

of goods and services. The Commonwealth distributes part of this revenue to other levels of government, principally the States and Territories.

## Outlays, revenue and financing transactions

The outlays, revenue and financing transactions of the Commonwealth non-financial public sector for the six year period ending 1995–96 are summarised in tables 27.7 to 27.9.

## 27.7 ECONOMIC TRANSACTIONS OF THE COMMONWEALTH GOVERNMENT, General Government

|                                                   | 1990-91       | 1991-92        | 1992-93        | 1993-94        | 1994-95        | 1995-96        |
|---------------------------------------------------|---------------|----------------|----------------|----------------|----------------|----------------|
|                                                   | \$m           | \$m            | \$m            | \$m            | \$m            | \$m            |
| <b>Outlays</b>                                    |               |                |                |                |                |                |
| Current outlays                                   |               |                |                |                |                |                |
| Current expenditure                               | 23 923        | 25 552         | 27 294         | 28 426         | 28 979         | 30 211         |
| Less sales of goods and services(a)               | 3 413         | 3 766          | 4 308          | 4 510          | 4 360          | 4 555          |
| Final consumption expenditure                     | 20 510        | 21 786         | 22 986         | 23 916         | 24 619         | 25 656         |
| Interest payments                                 | 6 189         | 5 748          | 5 413          | 6 630          | 8 164          | 9 293          |
| Subsidies paid to public trading enterprises      | 1 223         | 685            | 480            | 464            | 462            | 528            |
| Personal benefit payments                         | 36 125        | 41 137         | 44 759         | 48 333         | 50 281         | 54 104         |
| Current grants to                                 |               |                |                |                |                |                |
| Private sector                                    | 2 243         | 2 700          | 3 097          | 3 267          | 3 772          | 4 399          |
| State governments                                 | 19 563        | 20 546         | 21 420         | 22 309         | 23 440         | 24 660         |
| Onpassed through State Governments                | 4 535         | 5 155          | 5 439          | 5 972          | 6 571          | 6 831          |
| Local governments                                 | 97            | 155            | 190            | 185            | 196            | 211            |
| Total current grants                              | 26 437        | 28 556         | 30 145         | 31 734         | 33 979         | 36 101         |
| Other transfer payments                           | 1 615         | 1 811          | 2 062          | 2 339          | 2 344          | 2 489          |
| Total current outlays                             | 92 100        | 99 724         | 105 845        | 113 417        | 119 848        | 128 171        |
| Capital outlays                                   |               |                |                |                |                |                |
| Expenditure on new fixed assets                   | 1 451         | 1 682          | 1 241          | 1 386          | 1 328          | 1 359          |
| Plus expenditure on secondhand assets (net)       | -108          | -112           | -183           | -429           | -509           | -403           |
| Gross fixed capital expenditure                   | 1 343         | 1 570          | 1 058          | 956            | 819            | 955            |
| Expenditure on land and intangible assets (net)   | -44           | 46             | -15            | -201           | -80            | -30            |
| Capital grants to                                 |               |                |                |                |                |                |
| Other sectors                                     | 487           | 555            | 312            | 214            | 189            | 164            |
| Other levels of government                        | 4 357         | 3 721          | 5 229          | 3 789          | 3 108          | 3 029          |
| Public trading enterprises                        | 10            | 70             | 30             | 29             | 97             | 6              |
| Total grants                                      | 4 855         | 4 346          | 5 571          | 4 032          | 3 394          | 3 198          |
| Advances paid (net) to                            |               |                |                |                |                |                |
| Public trading enterprises                        | -332          | 354            | 19             | -434           | -11            | -629           |
| Abroad                                            | 195           | 181            | 170            | 150            | 138            | 266            |
| Other levels of government                        | -1 858        | -2 753         | -2 669         | -1 314         | -2 017         | -4 128         |
| Other                                             | 438           | 161            | -24            | -1 814         | 411            | -698           |
| Total advances                                    | -1 557        | -2 056         | -2 504         | -3 412         | -1 480         | -5 189         |
| Other capital outlays                             | 3             | -15            | 6              | -22            | -36            | 4              |
| Total capital outlays                             | 4 600         | 3 891          | 4 117          | 1 354          | 2 616          | -1 061         |
| <b>Total outlays</b>                              | <b>96 700</b> | <b>103 614</b> | <b>109 962</b> | <b>114 770</b> | <b>122 464</b> | <b>127 110</b> |
| <b>Revenue</b>                                    |               |                |                |                |                |                |
| Taxes, fees and fines                             | 93 578        | 88 353         | 89 661         | 94 193         | 105 864        | 116 738        |
| Interest received from public trading enterprises | 575           | 504            | 306            | 243            | 159            | 129            |
| Interest received from other enterprises          | 2 805         | 2 534          | 2 229          | 1 875          | 1 721          | 1 362          |
| Other revenue                                     | 1 654         | 2 666          | 3 245          | 4 754          | 3 009          | 4 033          |
| <b>Total revenue</b>                              | <b>98 611</b> | <b>94 057</b>  | <b>95 441</b>  | <b>101 065</b> | <b>110 753</b> | <b>122 262</b> |
| <b>Financing and deficit measures</b>             |               |                |                |                |                |                |
| Borrowing (net)                                   | 434           | 9 597          | 16 219         | 14 831         | 12 782         | 6 105          |
| Increase in provisions                            | -920          | -1 062         | -1 286         | -1 127         | -1 104         | -1 004         |
| Other financing transactions                      | -1 425        | 1 023          | -412           | 1              | 33             | -254           |
| <b>Total financing and deficit measures</b>       | <b>-1 911</b> | <b>9 558</b>   | <b>14 521</b>  | <b>13 706</b>  | <b>11 711</b>  | <b>4 847</b>   |
| Less increase in provisions (net)                 | -920          | -1 062         | -1 286         | -1 127         | -1 104         | -1 004         |
| <b>Deficit</b>                                    | <b>-991</b>   | <b>10 620</b>  | <b>15 807</b>  | <b>14 832</b>  | <b>12 815</b>  | <b>5 851</b>   |
| of which                                          |               |                |                |                |                |                |
| Current deficit(b)                                | -5 589        | 6 729          | 11 692         | 13 485         | 10 199         | 6 912          |
| Capital deficit(c)                                | 4 598         | 3 891          | 4 116          | 1 347          | 2 616          | -1 061         |
| Less advances paid (net)                          | -1 557        | -2 056         | -2 504         | -3 412         | -1 480         | -5 189         |
| <b>Deficit adjusted for net advances(d)</b>       | <b>565</b>    | <b>12 675</b>  | <b>18 311</b>  | <b>18 244</b>  | <b>14 295</b>  | <b>11 040</b>  |

(a) This item provides an indication of the extent of government charges levied. The charges (excluding inter-agency charges) are offset against gross expenditure in calculating final consumption expenditure and comprise mainly sales to the private sector.

(b) Revenue less current outlays plus increase in provisions less capital grants and other capital revenue. (c) Capital grants and other capital revenue less capital outlays. (d) This is defined as the cash-based deficit/surplus less net advances paid. Net advances

paid include equity sales and repayment of past policy lending, less equity injections/purchases and new policy lending.

Source: Government Finance Statistics, Australia 1995-96 (5512.0).



**27.8 ECONOMIC TRANSACTIONS OF THE COMMONWEALTH GOVERNMENT, Public Trading Enterprises**

|                                                 | 1990–91      | 1991–92      | 1992–93      | 1993–94       | 1994–95       | 1995–96      |
|-------------------------------------------------|--------------|--------------|--------------|---------------|---------------|--------------|
|                                                 | \$m          | \$m          | \$m          | \$m           | \$m           | \$m          |
| <b>Outlays</b>                                  |              |              |              |               |               |              |
| Current outlays                                 |              |              |              |               |               |              |
| Interest payments to                            |              |              |              |               |               |              |
| General government                              | 575          | 504          | 306          | 243           | 159           | 129          |
| Other enterprises                               | 2 115        | 2 091        | 1 798        | 1 643         | 1 518         | 937          |
| Total interest payments                         | 2 691        | 2 595        | 2 103        | 1 885         | 1 677         | 1 066        |
| Income transferred to general government        | 450          | 405          | 339          | 1 117         | 919           | 1 371        |
| Other transfer payments                         | 173          | 634          | 1 251        | 1 040         | 958           | 1 350        |
| Total current outlays                           | 3 313        | 3 634        | 3 693        | 4 042         | 3 554         | 3 787        |
| Capital outlays                                 |              |              |              |               |               |              |
| Expenditure on new fixed assets                 | 5 467        | 4 959        | 4 039        | 3 357         | 4 331         | 4 387        |
| Plus expenditure on secondhand assets (net)     | -823         | -492         | -304         | -413          | -262          | -149         |
| Gross fixed capital expenditure                 | 4 644        | 4 467        | 3 735        | 2 945         | 4 069         | 4 238        |
| Expenditure on land and intangible assets (net) | 131          | 12           | 14           | -51           | -16           | 60           |
| Capital grants                                  | —            | —            | 61           | 74            | 81            | 15           |
| Advances paid (net)                             | -1           | 27           | -2           | -3            | —             | —            |
| Other capital outlays                           | 1 262        | -431         | 305          | -530          | -388          | -43          |
| Total capital outlays                           | 6 036        | 4 075        | 4 114        | 2 436         | 3 746         | 4 269        |
| <b>Total outlays</b>                            | <b>9 349</b> | <b>7 708</b> | <b>7 807</b> | <b>6 478</b>  | <b>7 300</b>  | <b>8 056</b> |
| <b>Revenue</b>                                  |              |              |              |               |               |              |
| Sales of goods and services                     | 22 411       | 24 096       | 24 771       | 27 174        | 28 258        | 24 767       |
| Plus subsidies received                         | 1 349        | 549          | 469          | 468           | 468           | 503          |
| Less operating expenditure                      | 19 482       | 21 226       | 21 184       | 22 762        | 23 974        | 20 743       |
| Net operating surplus                           | 4 278        | 3 419        | 4 056        | 4 880         | 4 751         | 4 527        |
| Interest received                               | 494          | 389          | 273          | 234           | 358           | 292          |
| Capital grants received                         | 10           | 70           | 30           | 29            | 97            | 6            |
| Other revenue                                   | 21           | 15           | 23           | 34            | 53            | 33           |
| <b>Total revenue</b>                            | <b>4 803</b> | <b>3 894</b> | <b>4 382</b> | <b>5 178</b>  | <b>5 260</b>  | <b>4 857</b> |
| <b>Financing and deficit measures</b>           |              |              |              |               |               |              |
| Advances received (net)                         | -332         | 354          | 19           | -422          | 15            | -593         |
| Borrowing (net)                                 | 3 467        | 109          | 955          | -1 318        | -1 734        | -328         |
| Increase in provisions                          |              |              |              |               |               |              |
| For depreciation                                | 2 418        | 3 834        | 2 863        | 2 898         | 3 009         | 2 578        |
| Other                                           | -10          | 82           | 374          | -117          | 1 003         | 94           |
| Total increase in provisions                    | 2 407        | 3 916        | 3 237        | 2 781         | 4 012         | 2 672        |
| Other financing transactions                    | -997         | -564         | -786         | 260           | -253          | 1 448        |
| Total financing and deficit measures            | 4 546        | 3 815        | 3 425        | 1 300         | 2 039         | 3 199        |
| Less increase in provisions (net)               | 2 407        | 3 916        | 3 237        | 2 781         | 4 012         | 2 672        |
| <b>Deficit</b>                                  | <b>2 138</b> | <b>-101</b>  | <b>188</b>   | <b>-1 481</b> | <b>-1 973</b> | <b>527</b>   |
| of which                                        |              |              |              |               |               |              |
| Current deficit                                 | -3 888       | -4 105       | -3 896       | -3 888        | -5 621        | -3 737       |
| Capital deficit                                 | 6 026        | 4 004        | 4 084        | 2 407         | 3 648         | 4 264        |
| Less advances paid (net)                        | -1           | 27           | -2           | -3            | —             | —            |
| <b>Deficit adjusted for net advances</b>        | <b>2 139</b> | <b>-128</b>  | <b>190</b>   | <b>-1 478</b> | <b>-1 972</b> | <b>527</b>   |

Source: Government Finance Statistics, Australia 1995–96 (5512.0).

**27.9 COMMONWEALTH GOVERNMENT CONSOLIDATED OUTLAYS, By Purpose**

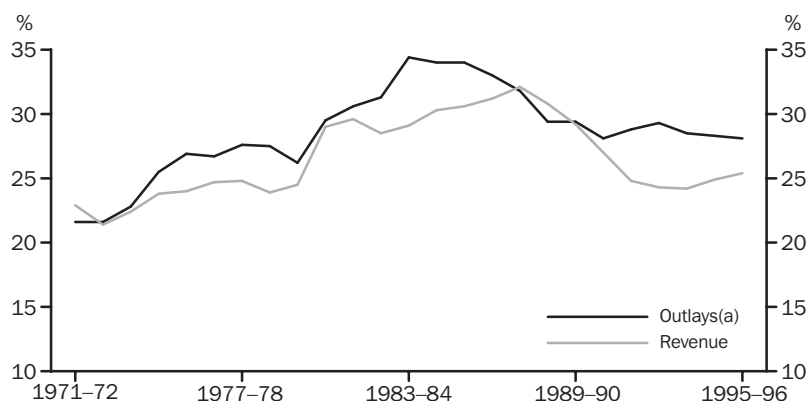
|                                            | 1990–91        | 1991–92        | 1992–93        | 1993–94        | 1994–95        | 1995–96        |
|--------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                            | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| General public services                    | 6 197          | 6 827          | 7 213          | 7 586          | 7 716          | 8 236          |
| Defence                                    | 8 325          | 8 606          | 9 009          | 9 236          | 9 146          | 9 393          |
| Public order and safety                    | 749            | 933            | 883            | 851            | 884            | 913            |
| Education                                  |                |                |                |                |                |                |
| Primary and secondary education            | 2 792          | 3 198          | 3 442          | 3 633          | 3 780          | 3 913          |
| Tertiary education                         | 4 454          | 4 978          | 5 459          | 5 835          | 6 008          | 6 408          |
| Other education                            | 313            | 312            | 362            | 392            | 392            | 359            |
| <i>Total education</i>                     | 7 559          | 8 487          | 9 263          | 9 860          | 10 180         | 10 680         |
| Health                                     |                |                |                |                |                |                |
| Hospital and other institutional services  | 6 482          | 6 773          | 6 965          | 7 313          | 7 580          | 7 943          |
| Other health                               | 6 399          | 6 968          | 7 820          | 8 736          | 9 521          | 10 542         |
| <i>Total health</i>                        | 12 881         | 13 741         | 14 785         | 16 049         | 17 101         | 18 485         |
| Social security and welfare                | 30 702         | 35 639         | 38 653         | 42 013         | 43 504         | 46 482         |
| Housing and community amenities            | 1 040          | 1 225          | 1 345          | 1 070          | 1 048          | 1 028          |
| Recreation and culture                     |                |                |                |                |                |                |
| Recreational facilities and services       | 130            | 173            | 180            | 235            | 244            | 265            |
| Cultural facilities and services           | 189            | 178            | 183            | 232            | 255            | 318            |
| Broadcasting and film production           | 793            | 759            | 743            | 567            | 696            | 766            |
| <i>Total recreation and culture</i>        | 1 112          | 1 111          | 1 106          | 1 035          | 1 195          | 1 350          |
| Fuel and energy                            | 586            | 696            | 712            | 609            | 836            | 926            |
| Agriculture, forestry, fishing and hunting | 3 885          | 1 500          | 2 078          | 1 088          | 1 119          | 1 765          |
| Mining, manufacturing, construction etc.   | 493            | 544            | 551            | 230            | 336            | 405            |
| Transport and communications               | 7 064          | 6 463          | 6 195          | 4 773          | 6 818          | 5 438          |
| Other economic affairs                     | 2 035          | 2 452          | 3 093          | 3 153          | 3 434          | 4 158          |
| Other purposes                             |                |                |                |                |                |                |
| Public debt                                | 8 304          | 7 840          | 7 211          | 8 273          | 9 682          | 10 230         |
| Other                                      | 14 250         | 13 104         | 14 148         | 13 602         | 14 830         | 13 592         |
| <i>Total other purposes</i>                | 22 555         | 20 943         | 21 359         | 21 875         | 24 512         | 23 822         |
| <b>Total</b>                               | <b>105 181</b> | <b>109 167</b> | <b>116 245</b> | <b>119 428</b> | <b>127 828</b> | <b>133 077</b> |

Source: Government Finance Statistics, Australia 1995–96 (5512.0).

Graph 27.10 shows the relationship between the movements in outlays and revenue, as a percentage of GDP(I), for the Commonwealth Government from 1971–72 to 1995–96. The outlays in the graph exclude net advances (i.e. loans made for policy purposes, and sales/injections of equity) and therefore provide

a better measure of the underlying movement in government outlays. The Commonwealth Government outlays and revenues fluctuate strongly depending on prevailing economic conditions, and this is reflected in large swings in the deficit/surplus measure (see graph 27.2).

27.10 COMMONWEALTH OUTLAYS AND REVENUE, % of GDP



(a) Adjusted for net advances.

Source: Government Finance Statistics, Australia 1995-96 (5512.0).

### Financial assistance by the Commonwealth Government to the States and Territories

The taxes levied by the Commonwealth Government are used to finance the Commonwealth's own-purpose policy programs

and are also distributed to other levels of government, principally the States and Territories, as grants. The distributions are based on principles applied by the Commonwealth Grants Commission. Table 27.11 shows details of grants to States/Territories and local governments classified by purpose.

27.11 COMMONWEALTH GRANTS TO STATES/TERRITORIES AND LOCAL GOVERNMENTS, 1995-96

|                                            | NSW           | Vic.         | Qld          | SA           | WA           | Tas.         | NT           | ACT        | Aust.         |
|--------------------------------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|---------------|
| Purpose                                    | \$m           | \$m          | \$m          | \$m          | \$m          | \$m          | \$m          | \$m        | \$m           |
| General public services                    | 118           | 84           | 50           | 36           | 30           | 9            | 1            | —          | 329           |
| Public order and safety                    | 44            | 38           | 21           | 12           | 14           | 5            | 3            | 3          | 140           |
| Education                                  |               |              |              |              |              |              |              |            |               |
| Primary and secondary education            | 1 084         | 825          | 561          | 243          | 316          | 80           | 33           | 67         | 3 209         |
| Tertiary education                         | 1 448         | 1 179        | 765          | 369          | 437          | 110          | 50           | 19         | 4 376         |
| Other                                      | 13            | 6            | 10           | 9            | 8            | 2            | 12           | 1          | 59            |
| Total education                            | 2 544         | 2 010        | 1 336        | 621          | 761          | 192          | 94           | 87         | 7 645         |
| Health                                     |               |              |              |              |              |              |              |            |               |
| Hospital and other institutional services  | 1 520         | 1 087        | 872          | 493          | 509          | 146          | 82           | 67         | 4 776         |
| Other                                      | 132           | 102          | 83           | 56           | 43           | 14           | 6            | 10         | 445           |
| Total health                               | 1 652         | 1 189        | 955          | 549          | 551          | 160          | 88           | 76         | 5 222         |
| Social security and welfare                | 450           | 377          | 200          | 145          | 124          | 45           | 13           | 14         | 1 368         |
| Housing and community amenities            | 337           | 224          | 197          | 71           | 100          | 35           | 35           | 27         | 1 027         |
| Recreation and culture                     | 75            | 1            | 10           | 1            | 1            | 6            | —            | —          | 93            |
| Agriculture, forestry, fishing and hunting | 84            | 14           | 65           | 14           | 11           | 17           | 8            | —          | 212           |
| Transport and communications               | 551           | 326          | 314          | 115          | 171          | 61           | 54           | 17         | 1 610         |
| Other economic affairs                     | 23            | 16           | 19           | 7            | 8            | 5            | 1            | 1          | 80            |
| Other purposes                             | 4 801         | 3 524        | 3 098        | 1 678        | 1 984        | 685          | 921          | 324        | 17 015        |
| <b>Total</b>                               | <b>10 678</b> | <b>7 804</b> | <b>6 264</b> | <b>3 252</b> | <b>3 756</b> | <b>1 220</b> | <b>1 219</b> | <b>552</b> | <b>34 746</b> |

Source: ABS, unpublished Government Finance data.

**State/Territory government  
finance**

State/Territory Governments perform the full range of government functions, other than those the Constitution deems the exclusive domain of the Commonwealth. The functions mainly administered by State/Territory Governments include public order, health, education, administration, transport, and maintenance of infrastructure. The revenue base of

State/Territory Governments is narrower than that of the Commonwealth and consists of taxes on property, employers' payrolls, and on provision and use of goods and services. This revenue base is supplemented by grants from the Commonwealth. Tables 27.12 and 27.13 summarise the economic transactions of the general government and public trading enterprise sectors of all State and Territory Governments combined. Table 27.14 presents consolidated outlays by purpose for all State and Territory Governments combined.

## 27.12 ECONOMIC TRANSACTIONS OF STATE AND TERRITORY GOVERNMENTS, General Government

|                                                    | 1990–91       | 1991–92       | 1992–93       | 1993–94       | 1994–95       | 1995–96        |
|----------------------------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|
|                                                    | \$m           | \$m           | \$m           | \$m           | \$m           | \$m            |
| <b>Outlays</b>                                     |               |               |               |               |               |                |
| Current outlays                                    |               |               |               |               |               |                |
| Current expenditure                                | 40 539        | 43 309        | 44 749        | 46 832        | 49 125        | 52 144         |
| Less sales of goods and services(a)                | 5 106         | 5 317         | 5 395         | 5 922         | 6 542         | 7 154          |
| Final consumption expenditure                      | 35 433        | 37 992        | 39 354        | 40 911        | 42 583        | 44 990         |
| Interest payments                                  | 7 691         | 7 405         | 7 541         | 7 534         | 7 418         | 7 076          |
| Subsidies paid to public trading enterprises       | 2 450         | 2 510         | 2 377         | 2 410         | 2 088         | 1 950          |
| Current grants to other governments                | 958           | 1 296         | 1 337         | 1 348         | 1 393         | 1 478          |
| Other transfer payments                            | 4 976         | 5 976         | 6 867         | 7 307         | 7 828         | 8 185          |
| <i>Total current outlays</i>                       | <i>51 507</i> | <i>55 179</i> | <i>57 476</i> | <i>59 510</i> | <i>61 310</i> | <i>63 678</i>  |
| Capital outlays                                    |               |               |               |               |               |                |
| Expenditure on new fixed assets                    | 5 722         | 5 633         | 6 351         | 5 938         | 6 278         | 6 434          |
| Plus expenditure on secondhand assets(b)           | -300          | -359          | -508          | -417          | -219          | -6 941         |
| Gross fixed capital expenditure                    | 5 422         | 5 273         | 5 842         | 5 521         | 6 059         | -507           |
| Expenditure on land and intangible assets (net)(b) | -142          | -183          | -364          | -437          | -461          | -2 025         |
| Capital grants to                                  |               |               |               |               |               |                |
| Other sectors                                      | 227           | 357           | 330           | 391           | 294           | 345            |
| Other governments(b)                               | 569           | 265           | 308           | 340           | 306           | 8 387          |
| Public trading enterprises                         | 1 634         | 1 752         | 1 935         | 2 051         | 1 916         | 1 885          |
| <i>Total capital grants</i>                        | <i>2 430</i>  | <i>2 374</i>  | <i>2 573</i>  | <i>2 783</i>  | <i>2 516</i>  | <i>10 618</i>  |
| Advances paid (net) to                             |               |               |               |               |               |                |
| Public financial enterprises                       | -68           | 2 114         | 481           | -1 188        | -98           | -262           |
| Public trading enterprises(c)                      | -688          | -139          | -98           | -251          | -201          | -5 643         |
| Other                                              | 20            | 6             | 7             | 38            | 36            | 54             |
| <i>Total advances</i>                              | <i>-849</i>   | <i>1 757</i>  | <i>-1 087</i> | <i>-2 267</i> | <i>-1 825</i> | <i>-7 445</i>  |
| Other capital outlays                              | -93           | -219          | -1 469        | -827          | -1 526        | -1 541         |
| <i>Total capital outlays</i>                       | <i>6 882</i>  | <i>9 226</i>  | <i>6 972</i>  | <i>5 638</i>  | <i>6 325</i>  | <i>694</i>     |
| <b>Total outlays</b>                               | <b>58 389</b> | <b>64 405</b> | <b>64 448</b> | <b>65 148</b> | <b>67 635</b> | <b>64 372</b>  |
| <b>Revenue</b>                                     |               |               |               |               |               |                |
| Taxes, fees and fines                              | 21 121        | 22 572        | 24 093        | 26 780        | 28 136        | 30 298         |
| Interest received from public trading enterprises  | 859           | 776           | 716           | 650           | 721           | 493            |
| Interest received from other enterprises           | 3 304         | 2 831         | 2 700         | 2 643         | 3 057         | 3 431          |
| Grants received                                    |               |               |               |               |               |                |
| For own use                                        | 23 604        | 23 925        | 25 923        | 25 783        | 26 315        | 27 611         |
| For onpassing                                      | 4 818         | 5 462         | 5 869         | 6 241         | 6 730         | 6 987          |
| <i>Total grants received</i>                       | <i>28 422</i> | <i>29 387</i> | <i>31 792</i> | <i>32 024</i> | <i>33 045</i> | <i>34 598</i>  |
| Other revenue                                      | 2 799         | 3 355         | 3 585         | 4 495         | 4 726         | 5 620          |
| <b>Total revenue</b>                               | <b>56 506</b> | <b>58 922</b> | <b>62 886</b> | <b>66 591</b> | <b>69 686</b> | <b>74 440</b>  |
| <b>Financing and deficit measures</b>              |               |               |               |               |               |                |
| Advances received (net)                            | -1 857        | -2 751        | -2 721        | -1 398        | -2 010        | -4 124         |
| Borrowing (net)                                    | 6 618         | 11 200        | 8 273         | 4 868         | 379           | -9 522         |
| Increase in provisions                             | 71            | 48            | -3            | -25           | 39            | 8              |
| Other financing transactions                       | -2 949        | -3 012        | -3 988        | -4 887        | -458          | 3 570          |
| <i>Total financing</i>                             | <i>1 883</i>  | <i>5 484</i>  | <i>1 561</i>  | <i>-1 443</i> | <i>-2 050</i> | <i>-10 067</i> |
| Less increase in provisions (net)                  | 71            | 48            | -3            | -25           | 39            | 8              |
| <b>Deficit</b>                                     | <b>1 812</b>  | <b>5 436</b>  | <b>1 564</b>  | <b>-1 418</b> | <b>-2 089</b> | <b>-10 075</b> |
| of which                                           |               |               |               |               |               |                |
| Current deficit(d)                                 | -848          | -122          | -346          | -3 208        | -5 310        | -7 789         |
| Capital deficit(e)                                 | 2 660         | 5 558         | 1 910         | 1 790         | 3 221         | -2 286         |
| Less advances paid (net)                           | -849          | 1 757         | -1 087        | -2 267        | -1 825        | -7 445         |
| <b>Deficit adjusted for net advances(f)</b>        | <b>2 660</b>  | <b>3 679</b>  | <b>2 651</b>  | <b>849</b>    | <b>-264</b>   | <b>-2 630</b>  |

(a) This item provides an indication of the extent of government charges levied. The charges (excluding inter-agency charges) are offset against gross expenditure in calculating final consumption expenditure and comprise mainly sales to the private sector.

(b) Due to the transfer of roads to the local government sector in 1995–96. (c) Due to repayments of advances by electricity distribution businesses in Victoria and New South Wales. (d) Revenue less current outlays plus increase in provisions less capital grants and other capital revenue. (e) Capital grants and other capital revenue less capital outlays. (f) This is defined as the cash-based deficit/surplus less net advances paid. Net advances paid include equity sales and repayment of past policy lending, less equity injections/purchases and new policy lending.

Source: ABS, unpublished Government Finance data.

**27.13 ECONOMIC TRANSACTIONS OF STATE AND TERRITORY GOVERNMENTS, Public Trading Enterprises**

|                                                 | 1990-91       | 1991-92       | 1992-93       | 1993-94       | 1994-95       | 1995-96        |
|-------------------------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|
|                                                 | \$m           | \$m           | \$m           | \$m           | \$m           | \$m            |
| <b>Outlays</b>                                  |               |               |               |               |               |                |
| Current outlays                                 |               |               |               |               |               |                |
| Interest payments to                            |               |               |               |               |               |                |
| General government                              | 850           | 765           | 717           | 646           | 712           | 477            |
| Other enterprises                               | 4 993         | 4 653         | 3 973         | 3 436         | 3 386         | 3 391          |
| Total interest payments                         | 5 843         | 5 417         | 4 689         | 4 082         | 4 098         | 3 868          |
| Income transferred to general government        | 928           | 1 354         | 1 487         | 2 274         | 2 508         | 3 284          |
| Other transfer payments                         | 425           | 469           | 421           | 416           | 363           | 388            |
| Total current outlays                           | 7 197         | 7 241         | 6 597         | 6 772         | 6 969         | 7 540          |
| Capital outlays                                 |               |               |               |               |               |                |
| Expenditure on new fixed assets                 | 6 253         | 6 317         | 6 626         | 7 104         | 7 059         | 6 536          |
| Plus expenditure on secondhand assets           | -499          | -384          | -1 183        | -1 373        | -572          | -867           |
| Gross fixed capital expenditure                 | 5 755         | 5 933         | 5 443         | 5 731         | 6 488         | 5 669          |
| Expenditure on land and intangible assets (net) | 69            | 100           | 51            | -272          | -224          | -157           |
| Capital grants to                               |               |               |               |               |               |                |
| Other sectors                                   | 36            | 20            | 38            | 45            | 59            | 56             |
| Other levels of government                      | 9             | —             | 45            | 52            | 28            | 10             |
| Total capital grants                            | 46            | 20            | 84            | 96            | 86            | 65             |
| Advances paid (net) to                          |               |               |               |               |               |                |
| Private sector                                  | -188          | -179          | -157          | -141          | 44            | -9 969         |
| Other                                           | -32           | -60           | -51           | -38           | -30           | -35            |
| Total advances(a)                               | -220          | -238          | -208          | -179          | 15            | -10 003        |
| Other capital outlays                           | -145          | 55            | 38            | -75           | -162          | 43             |
| Total capital outlays                           | 5 504         | 5 870         | 5 408         | 5 301         | 6 202         | -4 382         |
| <b>Total outlays</b>                            | <b>12 701</b> | <b>13 111</b> | <b>12 005</b> | <b>12 074</b> | <b>13 171</b> | <b>3 157</b>   |
| <b>Revenue</b>                                  |               |               |               |               |               |                |
| Sales of goods and services                     | 29 575        | 32 029        | 33 232        | 39 313        | 41 321        | 41 125         |
| Plus subsidies received                         | 2 425         | 2 488         | 2 368         | 2 421         | 2 085         | 2 072          |
| Less operating expenditure                      | 25 795        | 27 632        | 28 651        | 34 110        | 36 571        | 36 776         |
| Net operating surplus                           | 6 204         | 6 884         | 6 948         | 7 624         | 6 836         | 6 421          |
| Interest received                               | 869           | 669           | 453           | 323           | 449           | 524            |
| Capital grants received                         | 1 591         | 1 779         | 1 980         | 2 117         | 1 979         | 1 883          |
| Other revenue                                   | 528           | 597           | 544           | 710           | 907           | 551            |
| <b>Total revenue</b>                            | <b>9 192</b>  | <b>9 929</b>  | <b>9 926</b>  | <b>10 774</b> | <b>10 171</b> | <b>9 380</b>   |
| <b>Financing and deficit measures</b>           |               |               |               |               |               |                |
| Advances received (net)                         | -682          | -150          | -133          | -254          | -196          | -5 633         |
| Borrowing (net)                                 | 628           | 319           | -1 320        | -1 935        | -1 523        | -4 493         |
| Increase in provisions                          |               |               |               |               |               |                |
| For depreciation                                | 2 928         | 3 318         | 3 882         | 4 113         | 4 516         | 4 265          |
| Other                                           | 119           | -21           | -153          | -420          | -80           | 184            |
| Total increase in provisions                    | 3 047         | 3 297         | 3 730         | 3 694         | 4 436         | 4 448          |
| Other financing transactions                    | 516           | -283          | -197          | -205          | 283           | -546           |
| Total financing and deficit measures            | 3 509         | 3 182         | 2 079         | 1 299         | 3 000         | -6 223         |
| Less increase in provisions (net)               | 3 047         | 3 297         | 3 730         | 3 694         | 4 436         | 4 448          |
| <b>Deficit</b>                                  | <b>461</b>    | <b>-114</b>   | <b>-1 651</b> | <b>-2 394</b> | <b>-1 436</b> | <b>-10 671</b> |
| of which                                        |               |               |               |               |               |                |
| Current deficit                                 | -2 951        | -3 627        | -4 557        | -4 931        | -4 813        | -3 896         |
| Capital deficit                                 | 3 413         | 3 513         | 2 906         | 2 537         | 3 377         | -6 775         |
| Less advances paid (net)                        | -220          | -238          | -208          | -179          | 15            | -10 003        |
| <b>Deficit adjusted for net advances</b>        | <b>682</b>    | <b>124</b>    | <b>-1 443</b> | <b>-2 215</b> | <b>-1 451</b> | <b>-668</b>    |

(a) Negative outlays in this category in 1995-96 are due to electricity asset sales in Victoria.

Source: ABS, unpublished Government Finance data.

## 27.14 STATE AND TERRITORY GOVERNMENTS CONSOLIDATED OUTLAYS, By purpose

|                                              | 1990–91       | 1991–92       | 1992–93       | 1993–94       | 1994–95       | 1995–96       |
|----------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                              | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           |
| General public services                      | 4 104         | 6 536         | 4 870         | 5 049         | 4 899         | 2 984         |
| Public order and safety                      | 4 674         | 4 787         | 4 838         | 4 976         | 5 355         | 5 848         |
| Education                                    |               |               |               |               |               |               |
| Primary and secondary education              | 10 327        | 11 012        | 11 314        | 11 508        | 11 808        | 12 463        |
| Tertiary education                           | 4 790         | 5 127         | 5 554         | 5 915         | 6 245         | 6 337         |
| of which                                     |               |               |               |               |               |               |
| University education                         | 2 885         | 3 095         | 3 344         | 3 658         | 3 912         | 3 945         |
| Technical and further education              | 1 906         | 2 033         | 2 209         | 2 257         | 2 333         | 2 392         |
| Other education                              | 1 682         | 1 656         | 1 787         | 1 736         | 1 827         | 1 938         |
| <i>Total education</i>                       | 16 799        | 17 795        | 18 655        | 19 159        | 19 880        | 20 738        |
| Health                                       |               |               |               |               |               |               |
| Hospital and other institutional services    | 9 505         | 9 689         | 9 960         | 10 090        | 10 299        | 11 084        |
| Clinics and other non-institutional services | 777           | 963           | 1 031         | 1 080         | 1 486         | 1 569         |
| Other health                                 | 758           | 779           | 790           | 828           | 996           | 1 081         |
| <i>Total health</i>                          | 11 040        | 11 431        | 11 781        | 11 997        | 12 782        | 13 734        |
| Social security and welfare                  |               |               |               |               |               |               |
| Welfare services                             | 2 071         | 2 358         | 2 635         | 2 760         | 2 892         | 3 147         |
| Other social security and welfare            | 495           | 587           | 592           | 711           | 787           | 817           |
| <i>Total social security and welfare</i>     | 2 565         | 2 945         | 3 227         | 3 471         | 3 679         | 3 964         |
| Housing and community amenities              |               |               |               |               |               |               |
| Housing and community development            | 1 391         | 1 279         | 1 473         | 1 019         | 2 041         | 1 639         |
| Water supply                                 | 727           | 750           | 662           | 536           | 753           | 715           |
| Sanitation and protection of the environment | 1 074         | 1 074         | 1 058         | 991           | 1 025         | 884           |
| Other community amenities                    | 3             | 31            | 56            | 38            | 24            | 57            |
| <i>Total housing and community amenities</i> | 3 195         | 3 133         | 3 250         | 2 585         | 3 843         | 3 295         |
| Recreation and culture                       |               |               |               |               |               |               |
| Recreational facilities and services         | 989           | 1 170         | 1 129         | 989           | 91            | 1 160         |
| Cultural facilities and services             | 496           | 536           | 551           | 617           | 755           | 768           |
| Broadcasting and film production             | 8             | 9             | 10            | 12            | 15            | 15            |
| Other recreation and culture                 | 6             | 4             | 11            | 20            | 45            | -3            |
| <i>Total recreation and culture</i>          | 1 500         | 1 719         | 1 701         | 1 638         | 906           | 1 940         |
| Fuel and energy(a)                           | 2 299         | 2 437         | 1 621         | 987           | 2 546         | -7 852        |
| Agriculture, forestry, fishing and hunting   | 1 317         | 1 456         | 1 601         | 1 474         | 1 206         | 1 627         |
| Mining, manufacturing, construction etc.     | 290           | 271           | 88            | 231           | 85            | 270           |
| Transport and communications                 |               |               |               |               |               |               |
| Road transport                               | 4 225         | 4 110         | 4 787         | 3 303         | 4 629         | 5 083         |
| Water transport                              | 240           | 212           | 208           | 349           | 201           | 98            |
| Rail and multi-mode transport                | 2 152         | 2 410         | 2 617         | 3 317         | 3 004         | 2 867         |
| Other transport and communications           | 83            | 40            | 22            | 51            | -281          | 37            |
| <i>Total transport and communications</i>    | 6 701         | 6 772         | 7 634         | 7 020         | 7 553         | 8 085         |
| Other economic affairs                       | 949           | 1 281         | 1 728         | 1 706         | 1 759         | 1 463         |
| Other purposes                               |               |               |               |               |               |               |
| Public debt                                  | 12 694        | 11 989        | 11 321        | 10 828        | 10 562        | 10 190        |
| Other                                        | 81            | 1 064         | -124          | 1 197         | 578           | 1 002         |
| <i>Total other purposes</i>                  | 12 775        | 13 053        | 11 197        | 12 024        | 11 141        | 11 192        |
| <b>Total</b>                                 | <b>68 208</b> | <b>73 614</b> | <b>72 190</b> | <b>72 317</b> | <b>75 632</b> | <b>67 289</b> |

(a) Negative outlays in this category in 1995–96 are due to electricity asset sales during that year.

Source: ABS, unpublished Government Finance data.

## Local government finance

Local government authorities govern areas typically described as cities, towns, shires, boroughs, municipalities and district councils. Although the range of functions undertaken by local governments varies between the different jurisdictions, their powers and responsibilities are generally similar and cover such matters as:

- the construction and maintenance of roads, streets and bridges;
- water, sewerage and drainage systems;
- health and sanitary services;
- the supervision of building; and
- the administration of regulations relating to items such as slaughtering, weights and measures, and registration of dogs.

Local governments also provide transport facilities, electricity, gas and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, swimming pools, libraries and museums.

Local governments' own-source revenue is derived mainly from property taxes. They also rely on grants from the Commonwealth and their parent State/Territory Governments (except for the Australian Capital Territory, which has no separate local government).

Table 27.15 shows consolidated outlays of local governments classified by purpose. Tables 27.16 and 27.17 show the economic transactions and outlays for the general government and public trading enterprise activities of all local governments in Australia.

**27.15 LOCAL GOVERNMENTS CONSOLIDATED OUTLAYS, By purpose**

|                                              | 1990-91      | 1991-92      | 1992-93      | 1993-94      | 1994-95      | 1995-96       |
|----------------------------------------------|--------------|--------------|--------------|--------------|--------------|---------------|
|                                              | \$m          | \$m          | \$m          | \$m          | \$m          | \$m           |
| General public services                      | 1 475        | 1 552        | 1 495        | 1 479        | 1 441        | 1 384         |
| Public order and safety                      | 116          | 120          | 127          | 190          | 225          | 251           |
| Education                                    | 36           | 38           | 45           | 31           | 34           | 36            |
| Health                                       | 157          | 162          | 157          | 174          | 215          | 195           |
| Social security and welfare                  | 311          | 358          | 409          | 450          | 485          | 572           |
| Housing and community amenities              |              |              |              |              |              |               |
| Housing and community development            | 206          | 203          | 221          | 238          | 269          | 312           |
| Water supply                                 | 226          | 195          | 195          | 225          | 210          | 180           |
| Sanitation and protection of the environment | 670          | 626          | 652          | 633          | 719          | 996           |
| Other community amenities                    | 229          | 239          | 310          | 267          | 291          | 292           |
| <i>Total housing and community amenities</i> | <i>1 331</i> | <i>1 263</i> | <i>1 379</i> | <i>1 362</i> | <i>1 489</i> | <i>1 781</i>  |
| Recreation and culture                       |              |              |              |              |              |               |
| Recreational facilities and services         | 631          | 637          | 819          | 968          | 986          | 1 030         |
| Cultural facilities and services             | 286          | 284          | 269          | 364          | 421          | 484           |
| Other recreation and culture                 | 220          | 222          | 251          | 92           | 138          | 115           |
| <i>Total recreation and culture</i>          | <i>1 137</i> | <i>1 144</i> | <i>1 338</i> | <i>1 424</i> | <i>1 545</i> | <i>1 629</i>  |
| Fuel and energy(a)                           | 405          | 324          | 393          | 25           | 3            | -539          |
| Agriculture, forestry, fishing and hunting   | 16           | 17           | 16           | 12           | 13           | 16            |
| Mining, manufacturing, construction etc.     | 117          | 115          | 112          | 96           | 128          | 98            |
| Transport and communications(b)              | 1 906        | 1 944        | 2 116        | 2 000        | 1 894        | 10 150        |
| Other economic affairs                       | 61           | 64           | 73           | 71           | 10           | -10           |
| Other purposes                               | 1 265        | 1 028        | 1 015        | 672          | 623          | 601           |
| <b>Total</b>                                 | <b>8 332</b> | <b>8 128</b> | <b>8 675</b> | <b>7 989</b> | <b>8 106</b> | <b>16 163</b> |

(a) Negative outlays in this category in 1995-96 are due to electricity asset sales during that year. (b) The large 1995-96 figure is due to the transfer of roads from the State Government sector.

Source: ABS, unpublished Government Finance data.



## 27.16 ECONOMIC TRANSACTIONS OF LOCAL GOVERNMENTS, General Government

|                                                 | 1990–91      | 1991–92      | 1992–93      | 1993–94      | 1994–95      | 1995–96       |
|-------------------------------------------------|--------------|--------------|--------------|--------------|--------------|---------------|
|                                                 | \$m          | \$m          | \$m          | \$m          | \$m          | \$m           |
| <b>Outlays</b>                                  |              |              |              |              |              |               |
| Current outlays                                 |              |              |              |              |              |               |
| Current expenditure                             | 6 319        | 6 655        | 7 002        | 7 345        | 7 490        | 8 101         |
| Less sales of goods and services(a)             | 2 167        | 2 274        | 2 407        | 2 728        | 2 780        | 2 720         |
| Final consumption expenditure                   | 4 152        | 4 381        | 4 596        | 4 617        | 4 710        | 5 381         |
| Interest payments                               | 698          | 598          | 541          | 421          | 380          | 333           |
| Other transfer payments                         | 105          | 94           | 79           | 81           | 96           | 107           |
| Total current outlays                           | 4 955        | 5 073        | 5 216        | 5 119        | 5 186        | 5 820         |
| Capital outlays                                 |              |              |              |              |              |               |
| Expenditure on new fixed assets                 | 2 281        | 2 188        | 2 600        | 2 430        | 2 490        | 2 549         |
| Plus expenditure on secondhand assets (net)(b)  | -278         | -223         | -309         | -297         | -357         | 5 781         |
| Gross fixed capital expenditure                 | 2 003        | 1 965        | 2 291        | 2 133        | 2 133        | 8 330         |
| Expenditure on land and intangible assets (net) | 81           | 66           | 84           | 58           | 84           | 1 865         |
| Capital grants to other governments             | 2            | 2            | 29           | —            | 10           | 8             |
| Advances paid (net)                             | -6           | -16          | -14          | -11          | —            | -531          |
| Other capital outlays                           | 2            | 9            | 1            | 5            | 3            | 4             |
| Total capital outlays                           | 2 080        | 2 024        | 2 390        | 2 184        | 2 231        | 9 675         |
| <b>Total outlays</b>                            | <b>7 035</b> | <b>7 098</b> | <b>7 607</b> | <b>7 303</b> | <b>7 417</b> | <b>15 495</b> |
| <b>Revenue</b>                                  |              |              |              |              |              |               |
| Taxes, fees and fines                           | 4 480        | 4 703        | 4 968        | 5 145        | 5 256        | 5 522         |
| Interest received                               | 594          | 444          | 366          | 332          | 352          | 360           |
| Grants received(b)                              | 1 574        | 1 628        | 1 810        | 1 894        | 1 872        | 10 013        |
| Other revenue                                   | 201          | 206          | 142          | 307          | 294          | 459           |
| <b>Total revenue</b>                            | <b>6 849</b> | <b>6 981</b> | <b>7 286</b> | <b>7 679</b> | <b>7 774</b> | <b>16 353</b> |
| <b>Financing and deficit measures</b>           |              |              |              |              |              |               |
| Advances received (net)                         | -1           | 14           | -2           | 6            | 10           | -26           |
| Borrowing (net)                                 | 188          | 39           | -129         | -178         | -195         | -248          |
| Increase in provisions (net)                    | —            | —            | —            | —            | —            | —             |
| Other financing transactions (net)              | -1           | 64           | 451          | -203         | -173         | -583          |
| Total financing and deficit measures            | 186          | 117          | 320          | -376         | -357         | -858          |
| Less increase in provisions (net)               | —            | —            | —            | —            | —            | —             |
| <b>Deficit</b>                                  | <b>186</b>   | <b>117</b>   | <b>320</b>   | <b>-376</b>  | <b>-357</b>  | <b>-858</b>   |
| of which                                        |              |              |              |              |              |               |
| Current deficit(c)                              | -1 158       | -1 430       | -1 536       | -1 951       | -2 029       | -1 839        |
| Capital deficit(d)                              | 1 344        | 1 547        | 1 856        | 1 576        | 1 672        | 981           |
| Less advances paid (net)                        | -6           | -16          | -14          | -11          | —            | -531          |
| <b>Deficit adjusted for net advances(e)</b>     | <b>192</b>   | <b>133</b>   | <b>334</b>   | <b>-364</b>  | <b>-358</b>  | <b>-326</b>   |

(a) This item provides an indication of the extent of government charges levied. The charges (excluding inter-agency charges) are offset against gross expenditure in calculating final consumption expenditure and comprise mainly sales to the private sector.

(b) Due to the transfer of roads from the State Government sector in 1995–96. (c) Revenue less current outlays plus increase in provisions less capital grants and other capital revenue. (d) Capital grants and other capital revenue less capital outlays. (e) This is defined as the cash-based deficit/surplus less net advances paid. Net advances paid include equity sales and repayment of past policy lending, less equity injections/purchases and new policy lending.

Source: ABS, unpublished Government Finance data.

## 27.17 ECONOMIC TRANSACTIONS OF LOCAL GOVERNMENTS, Public Trading Enterprises

|                                                     | 1990-91      | 1991-92      | 1992-93      | 1993-94     | 1994-95     | 1995-96     |
|-----------------------------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|
|                                                     | \$m          | \$m          | \$m          | \$m         | \$m         | \$m         |
| <b>Outlays</b>                                      |              |              |              |             |             |             |
| Current outlays                                     |              |              |              |             |             |             |
| Interest payments                                   | 430          | 320          | 291          | 220         | 204         | 193         |
| Income transferred to general government            | 30           | 32           | 86           | 6           | 8           | 7           |
| Other transfer payments                             | 42           | -7           | 1            | —           | —           | —           |
| <i>Total current outlays</i>                        | <i>502</i>   | <i>344</i>   | <i>377</i>   | <i>226</i>  | <i>212</i>  | <i>200</i>  |
| Capital outlays                                     |              |              |              |             |             |             |
| Expenditure on new fixed assets                     | 852          | 744          | 729          | 468         | 495         | 489         |
| Plus expenditure on secondhand fixed assets (net)   | -34          | -41          | -29          | -5          | -10         | -14         |
| Gross fixed capital expenditure                     | 818          | 703          | 699          | 463         | 485         | 475         |
| Expenditure on land and intangible assets (net)     | 7            | 11           | 4            | 2           | —           | —           |
| Advances paid (net)                                 | -2           | -3           | -3           | —           | —           | —           |
| Other capital outlays                               | 3            | 9            | 3            | —           | —           | —           |
| <i>Total capital outlays</i>                        | <i>827</i>   | <i>720</i>   | <i>703</i>   | <i>465</i>  | <i>485</i>  | <i>475</i>  |
| <b>Total outlays</b>                                | <b>1 329</b> | <b>1 064</b> | <b>1 080</b> | <b>691</b>  | <b>697</b>  | <b>675</b>  |
| <b>Revenue</b>                                      |              |              |              |             |             |             |
| Sales of goods and services plus subsidies received | 5 556        | 4 137        | 4 306        | 1 936       | 1 560       | 1 567       |
| Less operating expenditure                          | 4 728        | 3 578        | 3 760        | 1 356       | 1 010       | 1 044       |
| Net operating surplus                               | 828          | 559          | 545          | 581         | 549         | 523         |
| Interest received                                   | 127          | 83           | 53           | 30          | 36          | 40          |
| Capital grants received                             | 98           | 87           | 80           | 87          | 85          | 82          |
| Other revenue                                       | 173          | 174          | 197          | 193         | 197         | 196         |
| <b>Total revenue</b>                                | <b>1 226</b> | <b>903</b>   | <b>876</b>   | <b>890</b>  | <b>868</b>  | <b>840</b>  |
| <b>Financing and deficit measures</b>               |              |              |              |             |             |             |
| Advances received (net)                             | -8           | -34          | -19          | —           | —           | —           |
| Borrowing (net)                                     | -33          | -28          | -54          | -154        | -106        | -49         |
| Increase in provisions (net)                        | 263          | 298          | 374          | 102         | 103         | 138         |
| Other financing transactions (net)                  | -120         | -75          | -97          | -148        | -168        | -254        |
| <i>Total financing and deficit measures</i>         | <i>103</i>   | <i>161</i>   | <i>204</i>   | <i>-200</i> | <i>-171</i> | <i>-165</i> |
| Less increase in provisions (net)                   | 263          | 298          | 374          | 102         | 103         | 138         |
| <b>Deficit</b>                                      | <b>-160</b>  | <b>-137</b>  | <b>-169</b>  | <b>-301</b> | <b>-274</b> | <b>-303</b> |
| of which                                            |              |              |              |             |             |             |
| Current deficit                                     | -716         | -596         | -596         | -500        | -491        | -515        |
| Capital deficit                                     | 555          | 459          | 426          | 199         | 217         | 212         |
| Less advances paid (net)                            | -2           | -3           | -3           | —           | —           | —           |
| <b>Deficit adjusted for net advances</b>            | <b>-158</b>  | <b>-134</b>  | <b>-166</b>  | <b>-301</b> | <b>-274</b> | <b>-303</b> |

Source: ABS, unpublished Government Finance data.

## Financial assets and liabilities

As well as providing transactions (flows) statistics, the GFS system provides levels (stocks) data on financial assets and liabilities of the Australian non-financial public sector. The statistics encompass deposits made or held by Australian governments, and all lending and borrowing they have undertaken, whether for policy purposes (termed 'advances') or for liquidity management and investment (other lending/borrowing). Briefly defined:

- Financial assets cover the financial claims of the non-financial public sector on other organisations (including other government authorities and overseas organisations) and

households. However, the financial assets shown below cover only 'debt-related' financial assets and do not include shares and other equity assets and financial assets related to trade credit and accounts receivable. Financial assets are shown before deduction of provisions for doubtful debts.

- Liabilities include all financial claims on the non-financial public sector except those related to trade credit and other accounts payable. Liabilities include lease liabilities under finance leases or similar arrangements and repayable amounts held as security deposits. Monies held on trust (excluding employee superannuation contributions) are included both as assets and liabilities of government. Coin on issue is not included as a liability of government.

Table 27.18 summarises the financial assets, liabilities and net financial position of the

non-financial public sector of the three levels of government.

**27.18 FINANCIAL ASSETS AND LIABILITIES OF THE COMMONWEALTH, STATE, TERRITORY AND LOCAL GOVERNMENTS, 30 June**

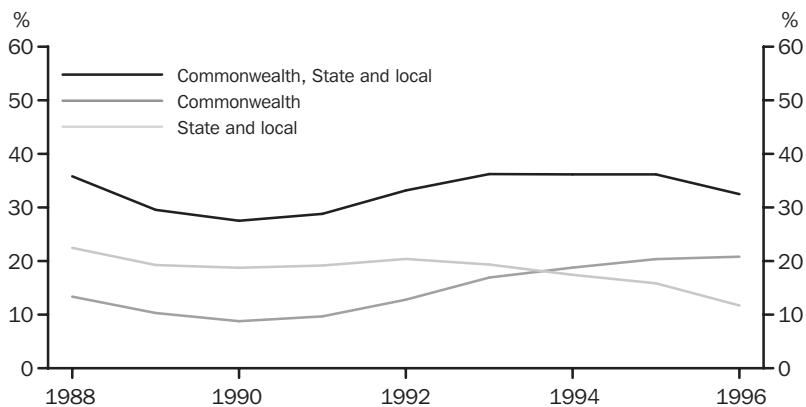
|                                                             | 1991    | 1992    | 1993    | 1994    | 1995    | 1996    |
|-------------------------------------------------------------|---------|---------|---------|---------|---------|---------|
|                                                             | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     |
| <b>COMMONWEALTH GOVERNMENT</b>                              |         |         |         |         |         |         |
| General government                                          |         |         |         |         |         |         |
| Gross debt                                                  | 49 510  | 59 882  | 79 408  | 94 064  | 107 499 | 112 993 |
| Total cash, deposits and lending                            | 32 877  | 29 095  | 24 515  | 24 402  | 24 297  | 19 792  |
| Net debt                                                    | 16 634  | 30 787  | 54 893  | 69 661  | 83 202  | 93 201  |
| Unfunded employee entitlements                              | n.a.    | n.a.    | 60 600  | 69 195  | 67 507  | 68 748  |
| Public trading enterprises                                  |         |         |         |         |         |         |
| Gross debt                                                  | 23 713  | 24 134  | 18 825  | 15 920  | 15 572  | 11 171  |
| Total cash, deposits and lending                            | 3 756   | 5 444   | 5 093   | 4 830   | 6 074   | 3 282   |
| Net debt                                                    | 19 957  | 18 690  | 13 732  | 11 090  | 9 498   | 7 889   |
| Unfunded employee entitlements                              | n.a.    | n.a.    | 770     | 707     | 695     | 695     |
| Consolidated government                                     |         |         |         |         |         |         |
| Gross debt                                                  | 68 862  | 80 085  | 96 080  | 108 234 | 121 529 | 123 174 |
| Total cash, deposits and lending                            | 32 272  | 30 609  | 27 456  | 27 482  | 28 830  | 22 085  |
| Net debt                                                    | 36 590  | 49 477  | 68 624  | 80 752  | 92 699  | 101 090 |
| Unfunded employee entitlements                              | n.a.    | n.a.    | 61 370  | 69 902  | 68 202  | 69 443  |
| <b>STATE AND TERRITORY GOVERNMENTS</b>                      |         |         |         |         |         |         |
| General government                                          |         |         |         |         |         |         |
| Gross debt                                                  | 59 789  | 67 849  | 76 187  | 80 024  | 77 126  | 63 867  |
| Total cash, deposits and lending                            | 32 233  | 33 593  | 39 985  | 43 256  | 43 400  | 40 628  |
| Net debt                                                    | 27 556  | 34 256  | 36 203  | 36 768  | 33 726  | 23 239  |
| Unfunded employee entitlements                              | n.a.    | n.a.    | 51 298  | 48 168  | 50 949  | 53 849  |
| Public trading enterprises                                  |         |         |         |         |         |         |
| Gross debt                                                  | 47 315  | 47 213  | 46 256  | 43 388  | 43 760  | 39 495  |
| Total cash, deposits and lending                            | 6 489   | 7 087   | 7 275   | 6 969   | 6 974   | 7 135   |
| Net debt                                                    | 40 826  | 40 126  | 38 980  | 36 419  | 36 786  | 32 359  |
| Unfunded employee entitlements                              | n.a.    | n.a.    | 6 585   | 6 319   | 6 418   | 6 089   |
| Consolidated government                                     |         |         |         |         |         |         |
| Gross debt                                                  | 97 038  | 105 344 | 110 984 | 111 524 | 110 312 | 93 724  |
| Total cash, deposits and lending                            | 28 656  | 30 962  | 35 801  | 38 338  | 39 793  | 38 124  |
| Net debt                                                    | 68 382  | 74 382  | 75 183  | 73 186  | 70 519  | 55 600  |
| Unfunded employee entitlements                              | n.a.    | n.a.    | 57 883  | 54 487  | 57 366  | 59 937  |
| <b>LOCAL GOVERNMENTS</b>                                    |         |         |         |         |         |         |
| Consolidated government                                     |         |         |         |         |         |         |
| Gross debt                                                  | 8 649   | 7 988   | 7 512   | 6 810   | 6 474   | 6 148   |
| Total cash, deposits and lending                            | 4 437   | 3 460   | 4 283   | 4 986   | 4 895   | 4 903   |
| Net debt                                                    | 4 212   | 4 528   | 3 229   | 1 824   | 1 579   | 1 245   |
| Unfunded employee entitlements                              | n.a.    | n.a.    | n.a.    | n.a.    | n.a.    | n.a.    |
| <b>STATE, TERRITORY AND LOCAL GOVERNMENTS</b>               |         |         |         |         |         |         |
| Consolidated government                                     |         |         |         |         |         |         |
| Gross debt                                                  | 104 839 | 112 935 | 117 301 | 117 824 | 115 823 | 99 020  |
| Total cash, deposits and lending                            | 32 245  | 34 025  | 38 889  | 42 813  | 43 725  | 42 176  |
| Net debt                                                    | 72 594  | 78 910  | 78 412  | 75 011  | 72 098  | 56 844  |
| Unfunded employee entitlements                              | n.a.    | n.a.    | n.a.    | n.a.    | n.a.    | n.a.    |
| <b>COMMONWEALTH, STATE, TERRITORY AND LOCAL GOVERNMENTS</b> |         |         |         |         |         |         |
| Consolidated government                                     |         |         |         |         |         |         |
| Gross debt                                                  | 148 647 | 170 099 | 190 453 | 204 313 | 217 458 | 207 536 |
| Total cash, deposits and lending                            | 39 462  | 41 711  | 43 416  | 48 551  | 52 660  | 49 603  |
| Net debt                                                    | 109 185 | 128 388 | 147 037 | 155 762 | 164 798 | 157 933 |
| Unfunded employee entitlements                              | n.a.    | n.a.    | n.a.    | n.a.    | n.a.    | n.a.    |

Source: Government Finance Statistics, Australia (5512.0).

Graph 27.19 shows the movements in net debt as a percentage of GDP(I) for the Commonwealth Government; State/Territory Governments and local governments combined; and all governments combined, from 30 June 1988 to 30 June 1996. Over this period,

Commonwealth net debt has increased as a percentage of GDP, but State/Territory and local government net debt has decreased substantially, leading to a decrease in total government net debt as a percentage of GDP.

27.19 NET DEBT OF ALL LEVELS OF GOVERNMENT, % of GDP — at 30 June



Source: Public Sector Financial Assets and Liabilities, Australia (5513.0).

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## Introduction

Prices are a key factor in the operation of an economy. Price indexes, which provide summary measures of the movements in various categories of prices, are used extensively to analyse and monitor price behaviour, and to adjust government payments such as pensions.

This chapter provides an outline of the major price indexes, their history, and their underlying concepts and methodology. More detailed information is contained in the source publications referred to throughout the chapter and in the bibliography.

## Consumer Price Index

The description of the Consumer Price Index (CPI) commonly adopted by users is in terms of its perceived uses; hence the frequent references to the CPI as a measure of inflation, a measure of changes in purchasing power, or a measure of changes in the cost of living. None is strictly correct. In objective statistical terms the most appropriate general description is: a measure of changes, over time, in retail prices of a constant basket of goods and services. As such, the CPI is a general indicator of the rate of change in prices paid by household consumers for the goods and services they buy.

The simplest way of thinking about the CPI is to imagine a basket of goods and services of the kind bought by Australian households. As prices vary, the total price of this basket will also vary. The CPI is simply a measure of the changes in the price of this basket as the prices of items in it change.

The price of the CPI basket in the base period is assigned a value of 100.0 and the prices in other periods are expressed as percentages of the price in the base period. For example, if the price of the basket had increased 35% since the base year, then the index would read 135.0. Similarly, if the price had fallen by 5% since the base year, the index would stand at 95.0.

For practical reasons, the CPI basket cannot include every item bought by households, but it does include all the important kinds of items. It is not necessary to include every item that people buy since many related items are subject to similar price changes. The idea is to select representative items so that the index reflects

price changes for a much wider range of goods and services than is actually priced.

The total basket is divided into the following eight major commodity groups: food; clothing; housing; household equipment and operation; transportation; tobacco and alcohol; health and personal care; and recreation and education. These groups are divided in turn into 35 subgroups, and the subgroups into 107 expenditure classes.

In addition to the aggregate All groups index, indexes are also compiled and published for each of the groups, subgroups and expenditure classes for each State capital city, Darwin and Canberra. National indexes are constructed as the weighted average of the indexes compiled for each of the eight capital cities.

The CPI is the latest of a number of retail price indexes which have been constructed for various purposes by the ABS. The history of retail price indexes in Australia is published in *Year Book Australia, 1995*.

## Index population

The CPI measures price changes relating to the spending pattern of a large proportion of metropolitan employee households. This group is termed the CPI population group. For this purpose employee households have been defined as those households which obtain at least three-quarters of their total income from wages and salaries, excluding the top 10% (in terms of income) of such households. Metropolitan means the State capital cities, together with Darwin and Canberra.

However, the exclusion of particular subgroups of the Australian population from the CPI population group does not necessarily mean that the CPI does not provide a suitable measure of price change for all household types. For example, a study undertaken by the ABS in 1992 (and updated in 1995) showed that an experimental index constructed to reflect the expenditure patterns of age pensioner households displayed little variation from the CPI over a period of nearly 11 years, although there were some differences in index movements when shorter periods were examined.

## Conceptual basis

The CPI is a quarterly measure of the change in average retail price levels. It provides a method of comparing the average price level for a

quarter with the average price level of the reference base year or changes in the average price level from one quarter to any other quarter.

In measuring price changes, the CPI aims to measure only pure price changes (i.e., it is concerned with isolating and measuring only that element of price change which is not brought about by any change to either the quantity or the quality of the goods or services concerned). In other words it aims to measure, each quarter, the change in the cost of purchasing an identical basket of goods and services. This involves evaluating changes in the quality of goods and services included in the index and removing the effects of such changes from the prices used to construct the index.

The CPI is also a measure of changes in the prices actually paid by consumers for the goods and services they buy. It is not concerned with nominal, recommended or list prices (unless they are the prices consumers actually pay).

Although the CPI is often loosely called a 'cost-of-living' index this is not strictly correct. A true cost-of-living index would, among other things, need to be concerned with changes in standards of living and with the substitutions that consumers make in order to maintain their standard of living in the face of changing market conditions (for instance, buying chicken rather than beef when beef prices are high).

The CPI basket includes goods and services ranging from steak to motor cars and from dental fillings to restaurant meals. The items are chosen not only because they represent the spending habits of the CPI population group but also because the items are those whose prices can be associated with identifiable and specific commodities and services. While government taxes and charges which are associated with the use of specific goods and services (such as excise duty, sales taxes, local government rates, etc.) are included, income taxes and the income-related Medicare levy are excluded because they cannot be clearly associated with the purchase or use of a specific quantity of any good or service.

Items are not excluded from the CPI basket on the basis of moral or social judgements. For example, some people may regard the use of tobacco and alcohol as socially undesirable, but these commodities are included in the CPI basket because they are significant items of household expenditure and their prices can be accurately measured. However, to assist in

understanding the effect that major item groups have on the CPI, the ABS publishes a range of supplementary indexes which exclude, in turn, each of the eight major commodity groups. These supplementary indexes can also be used in their own right for evaluating price changes or for indexation purposes.

## Periodic reviews of the CPI

Like any other long-standing and important statistical series, the CPI is reviewed from time to time to ensure that it continues to be relevant to current conditions. Over time, household spending habits change and the range of available goods and services also changes. The CPI needs to be updated to take account of these changes.

Since its inception in its current form in 1960, reviews of the CPI have usually been carried out at about five-yearly intervals. Following each review, which involves revising the list of items and their weights, the new series are linked to the old to form continuous series. This linking is carried out in such a way that the resulting continuous series reflects only price changes and not differences in the prices of the old and new baskets.

In addition to revising weights to reflect new expenditure patterns (based on the 1988–89 ABS Household Expenditure Survey) and re-referencing the index to the 1989–90 base period, the review also considered a number of conceptual and methodological issues, including the treatment of home ownership costs.

The current (12th series) CPI reflects expenditure patterns from the 1988–89 Household Expenditure Survey and has a reference base of 1989–90. It was introduced in September quarter 1992.

Decisions on the latest review are outlined in Information Paper: *Outcome of the 13th Series Australian Consumer Price Index Review* (6453.0). The 13th series CPI will be introduced in September quarter 1998. In addition to including updated expenditure patterns based on the 1993–94 Household Expenditure Survey, the 13th series will:

- have as its principal purpose the measurement of price inflation for the household sector rather than a measure of changes in living costs. Reflecting the change in purpose, interest charges will be removed from the CPI and the cost of owner occupied housing will include purchases of new dwellings (excluding land);

- have the population coverage expanded from households whose major source of income is wages and salaries to all private households, but the regional coverage will remain confined to the eight capital cities;
- continue to be compiled and published quarterly; and
- include changes to the commodity and item coverage to reflect changes in expenditure patterns.

Final details of the construction of the 13th series CPI will be described in an Information Paper scheduled for release in September 1998.

## Weighting pattern

Between periodic reviews of the CPI, each of the 107 expenditure classes has a fixed weight (i.e., the measure of its relative importance). Details of the weighting pattern for the current (12th series) CPI are shown in table 28.1.

**28.1 CONSUMER PRICE INDEX, Weighted Average of Capital Cities(a)**

| Groups and subgroups                     | Contribution to the All groups CPI<br>% |
|------------------------------------------|-----------------------------------------|
| <b>Food</b>                              |                                         |
| Dairy products                           | 1.463                                   |
| Cereal products                          | 2.097                                   |
| Meat and seafoods                        | 3.001                                   |
| Fresh fruit and vegetables               | 1.417                                   |
| Processed fruit and vegetables           | 0.829                                   |
| Soft drinks, ice cream and confectionery | 2.890                                   |
| Meals out and take away foods            | 4.959                                   |
| Other food                               | 1.668                                   |
| <b>Total</b>                             | <b>18.324</b>                           |
| <b>Clothing</b>                          |                                         |
| Men's and boys' clothing                 | 1.686                                   |
| Women's and girls' clothing              | 2.545                                   |
| Fabrics and knitting wool                | 0.746                                   |
| Footwear                                 | 1.063                                   |
| Dry cleaning and shoe repairs            | 0.224                                   |
| <b>Total</b>                             | <b>6.264</b>                            |
| <b>Housing</b>                           |                                         |
| Rents                                    | 4.865                                   |
| Home ownership                           | 11.035                                  |
| <b>Total</b>                             | <b>15.900</b>                           |
| <b>Household equipment and operation</b> |                                         |
| Fuel and light                           | 2.339                                   |
| Furniture and floor coverings            | 4.344                                   |
| Appliances                               | 1.538                                   |
| Household textiles                       | 0.754                                   |

For footnotes see end of table.

...continued

**28.1 CONSUMER PRICE INDEX, Weighted Average of Capital Cities(a) — continued**

| Groups and subgroups                                      | Contribution to the All groups CPI<br>% |
|-----------------------------------------------------------|-----------------------------------------|
| <b>Household equipment and operation</b><br>— (continued) |                                         |
| Household utensils and tools                              | 1.212                                   |
| Household supplies and services                           | 3.970                                   |
| Postal and telephone services                             | 1.715                                   |
| Consumer credit charges                                   | 2.498                                   |
| <b>Total</b>                                              | <b>18.370</b>                           |
| <b>Transportation</b>                                     |                                         |
| Private motoring                                          | 14.755                                  |
| Urban transport fares                                     | 1.212                                   |
| <b>Total</b>                                              | <b>15.967</b>                           |
| <b>Tobacco and alcohol</b>                                |                                         |
| Alcoholic drinks                                          | 5.061                                   |
| Cigarettes and tobacco                                    | 2.414                                   |
| <b>Total</b>                                              | <b>7.475</b>                            |
| <b>Health and personal care</b>                           |                                         |
| Health services                                           | 3.961                                   |
| Personal care products                                    | 2.097                                   |
| Hairdressing services                                     | 0.792                                   |
| <b>Total</b>                                              | <b>6.850</b>                            |
| <b>Recreation and education</b>                           |                                         |
| Books, newspapers and magazines                           | 1.146                                   |
| Recreational goods                                        | 2.564                                   |
| Holiday travel and accommodation                          | 2.349                                   |
| Recreational services                                     | 2.852                                   |
| Education and child care                                  | 1.939                                   |
| <b>Total</b>                                              | <b>10.850</b>                           |
| <b>Total All groups</b>                                   | <b>100.000</b>                          |

(a) Weighting Pattern at June quarter 1992.

Source: *The Australian Consumer Price Index 12th Series Review* (6450.0).

## Price collection

Since the CPI is designed to measure the impact of changing prices on metropolitan employee households, information about prices is collected in the kinds of retail outlets or other places where these households normally purchase goods and services. Prices are collected from many sources, including supermarkets, department stores, footwear stores, restaurants, motor vehicle dealers and service stations, dental surgeries, hotels and clubs, schools, hairdressers, travel agents and airlines, bus operators, electricians and plumbers. Items like rail fares, electricity and gas charges, telephone charges and local government rates are collected from the authorities concerned. Information on rents is obtained from property management companies and from government housing commissions. In total, around 100,000 separate price quotations are collected each quarter.

The collection of prices in each capital city is carried out by trained ABS field staff.

The prices used in the CPI are those that any member of the public would have to pay to purchase the specified good or service. Any sales or excise taxes attached to goods are included in the CPI price. Sale prices, discount prices and 'specials' are reflected in the CPI so long as the items concerned are of normal quality (that is, not damaged or shop-soiled), and are offered for sale in reasonable quantities. To ensure that the price movements reflect the buying experience of the bulk of the metropolitan population, the brands and the varieties of the items which are priced are generally those which sell in greatest volume.

### Price movements by city

Table 28.2 presents All groups index numbers for each of the eight capital cities and for the weighted average of the eight capital cities, together with percentage changes.

The capital city indexes measure price movements over time in each city individually. They do not measure differences in retail price levels between cities. For example, the index for Adelaide in 1996–97 of 122.3 compared with the corresponding index for Sydney of 120.4 does not mean that prices in Adelaide are higher than those in Sydney. It simply means that, since the base period (1989–90), prices in Adelaide have

increased by a greater percentage than those in Sydney (22.3% compared with 20.4%).

### Price movements by broad commodity group

Table 28.3 presents, for the weighted average of the eight capital cities, index numbers for each of the eight major commodity groups and for the All groups, together with percentage changes.

### Alternative measures of consumer price inflation

The various uses of the CPI may be grouped into two major categories. The first relates to uses of the CPI to assess changes in the purchasing power of household incomes, particularly as input to income adjustment processes. The second relates to uses as a general measure of inflation; the way it is reported by the media and commented on by informed institutions and individuals plays an important role in the formation of inflationary expectations, both within the Australian community and abroad.

It is not possible to produce a single measure that is entirely suitable for both purposes, due to certain fundamental differences in requirements. For more details, see the ABS Information Paper: *Issues to be Considered during the 13th Series Australian Consumer Price Index Review 1997* (6451.0).

**28.2 CONSUMER PRICE INDEX, All Groups Index Numbers(a)(b)**

| Year                          | Sydney | Melbourne | Brisbane | Adelaide | Perth | Hobart | Canberra | Darwin | Weighted average of eight capital cities |
|-------------------------------|--------|-----------|----------|----------|-------|--------|----------|--------|------------------------------------------|
| INDEX NO.(c)                  |        |           |          |          |       |        |          |        |                                          |
| 1991–92                       | 106.7  | 108.1     | 107.0    | 108.9    | 105.9 | 107.1  | 107.8    | 108.0  | <b>107.3</b>                             |
| 1992–93                       | 107.7  | 108.9     | 108.5    | 111.2    | 106.2 | 108.5  | 109.5    | 109.5  | <b>108.4</b>                             |
| 1993–94                       | 109.2  | 111.1     | 110.6    | 113.4    | 108.5 | 111.7  | 111.4    | 111.5  | <b>110.4</b>                             |
| 1994–95                       | 113.0  | 114.1     | 114.7    | 116.9    | 112.3 | 115.2  | 115.1    | 114.7  | <b>113.9</b>                             |
| 1995–96                       | 118.7  | 118.4     | 119.1    | 121.2    | 116.7 | 119.6  | 120.3    | 119.5  | <b>118.7</b>                             |
| 1996–97                       | 120.4  | 119.9     | 121.0    | 122.3    | 118.3 | 121.4  | 121.2    | 121.6  | <b>120.3</b>                             |
| CHANGE FROM PREVIOUS YEAR (%) |        |           |          |          |       |        |          |        |                                          |
| 1991–92                       | 1.7    | 2.2       | 2.0      | 2.5      | 0.8   | 2.1    | 2.6      | 2.2    | <b>1.9</b>                               |
| 1992–93                       | 0.9    | 0.7       | 1.4      | 2.1      | 0.3   | 1.3    | 1.6      | 1.4    | <b>1.0</b>                               |
| 1993–94                       | 1.4    | 2.0       | 1.9      | 2.0      | 2.2   | 2.9    | 1.7      | 1.8    | <b>1.8</b>                               |
| 1994–95                       | 3.5    | 2.7       | 3.7      | 3.1      | 3.5   | 3.1    | 3.3      | 2.9    | <b>3.2</b>                               |
| 1995–96                       | 5.0    | 3.8       | 3.8      | 3.7      | 3.9   | 3.8    | 4.5      | 4.2    | <b>4.2</b>                               |
| 1996–97                       | 1.4    | 1.3       | 1.6      | 0.9      | 1.4   | 1.5    | 0.7      | 1.8    | <b>1.3</b>                               |

(a) Reference base year 1989–90 = 100.0. (b) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities. (c) Index numbers for financial years are calculated as the simple arithmetic averages of the quarterly index numbers.

Source: *Consumer Price Index* (6401.0).

**28.3 CONSUMER PRICE INDEX, Group Index Numbers — Weighted Average of Capital Cities(a)**

| Year                          | Food  | Clothing | Housing | Household<br>equipment<br>and operation | Transportation | Tobacco<br>and alcohol | Health and<br>personal<br>care | Recreation<br>and education | All groups |
|-------------------------------|-------|----------|---------|-----------------------------------------|----------------|------------------------|--------------------------------|-----------------------------|------------|
| INDEX NO.(b)                  |       |          |         |                                         |                |                        |                                |                             |            |
| 1991–92                       | 105.8 | 106.4    | 98.9    | 107.5                                   | 108.8          | 115.0                  | 121.3                          | 106.9                       | 107.3      |
| 1992–93                       | 107.4 | 107.5    | 94.6    | 107.3                                   | 111.3          | 124.4                  | 124.0                          | 109.1                       | 108.4      |
| 1993–94                       | 109.4 | 106.7    | 94.2    | 107.8                                   | 113.8          | 133.7                  | 129.0                          | 111.9                       | 110.4      |
| 1994–95                       | 112.1 | 106.7    | 100.0   | 109.2                                   | 117.5          | 141.0                  | 135.5                          | 114.6                       | 113.9      |
| 1995–96                       | 116.0 | 107.0    | 105.9   | 111.7                                   | 122.6          | 156.1                  | 141.8                          | 117.7                       | 118.7      |
| 1996–97                       | 119.7 | 107.3    | 101.6   | 113.5                                   | 124.3          | 161.4                  | 149.1                          | 119.7                       | 120.3      |
| CHANGE FROM PREVIOUS YEAR (%) |       |          |         |                                         |                |                        |                                |                             |            |
| 1991–92                       | 2.4   | 1.7      | –4.4    | 2.3                                     | 1.8            | 5.7                    | 10.7                           | 1.8                         | 1.9        |
| 1992–93                       | 1.5   | 1.0      | –4.3    | –0.2                                    | 2.3            | 8.2                    | 2.2                            | 2.1                         | 1.0        |
| 1993–94                       | 1.9   | –0.7     | –0.4    | 0.5                                     | 2.2            | 7.5                    | 4.0                            | 2.6                         | 1.8        |
| 1994–95                       | 2.5   | —        | 6.2     | 1.3                                     | 3.3            | 5.5                    | 5.0                            | 2.4                         | 3.2        |
| 1995–96                       | 3.5   | 0.3      | 5.9     | 2.3                                     | 4.3            | 10.7                   | 4.6                            | 2.7                         | 4.2        |
| 1996–97                       | 3.2   | 0.3      | –4.1    | 1.6                                     | 1.4            | 3.4                    | 5.1                            | 1.7                         | 1.3        |

(a) Reference base year 1989–90 = 100.0. (b) Index numbers for financial years are calculated as the simple arithmetic averages of the quarterly index numbers.

Source: *Consumer Price Index (6401.0)*.

Recognising the differences in requirements and the resulting variations in practices which had been adopted by member countries of the International Labour Organisation (ILO) in compiling their national CPIs, the Fourteenth International Conference of Labour Statisticians (Geneva, 1987) adopted a resolution which called for countries to 'provide for dissemination at the international level of an index which excludes shelter, in addition to the all items index.' See the section *International Comparisons* below.

While indexes which exclude shelter costs remove an important source of non-comparability, and are therefore preferable to unadjusted national CPIs for the purposes of international comparisons of inflation rates, there is a need for other measures for some purposes. In particular, there is the requirement for measures which seek to remove temporary influences and one-off changes in order to focus on the 'underlying' inflation rate.

There is no universally accepted methodology for deriving a measure of an 'underlying' inflation rate. The Reserve Bank of Australia (RBA) and the Commonwealth Department of the Treasury (Treasury) have developed several alternative measures which, while based on the CPI, exclude various components which have

been assessed as contributing significant temporary influences from time to time.

These issues are addressed in an ABS *Information Paper: An Analytical Framework for Price Indexes in Australia* (6421.0). That paper looks at bringing together the various ABS price indexes in a framework which will assist in the analysis of inflation. The current consumer, producer and international trade price indexes all contribute to a view of price pressures and movements occurring within the economy, and can be used to develop an economy-wide price index model.

Table 28.4 presents the All groups CPI, the series recommended for international comparisons (All groups excluding housing), and a number of possible 'underlying' measures including the Treasury measure.

No single series can be claimed to provide the ideal guide to 'underlying' inflation in every time period due to variations in the sources of particular 'shocks'. Judgement will still be required in assessing the trend from period to period. However, Treasury and the RBA have agreed that the Treasury series provides the best available guide to 'underlying' inflation for macro-economic policy purposes.

## 28.4 ALTERNATIVE MEASURES OF CONSUMER PRICE INFLATION(a)

| 28.4 ALTERNATIVE MEASURES OF CONSUMER PRICE INFLATION(a) |            |                                    |                                                                    |                                      |          |       |                                   |
|----------------------------------------------------------|------------|------------------------------------|--------------------------------------------------------------------|--------------------------------------|----------|-------|-----------------------------------|
|                                                          |            |                                    |                                                                    | Private sector goods and services(c) |          |       |                                   |
|                                                          |            | All groups<br>excluding<br>housing | All groups<br>excluding<br>interest and<br>'volatile<br>items' (b) |                                      |          |       | Treasury<br>Underlying<br>Rate(d) |
| Year                                                     | All groups |                                    |                                                                    | Goods                                | Services | Total |                                   |
| INDEX NO.(e)                                             |            |                                    |                                                                    |                                      |          |       |                                   |
| 1991-92                                                  | 107.3      | 108.8                              | 109.3                                                              | 107.9                                | 108.0    | 107.9 | 108.2                             |
| 1992-93                                                  | 108.4      | 111.0                              | 112.1                                                              | 110.9                                | 109.0    | 110.4 | 110.4                             |
| 1993-94                                                  | 110.4      | 113.5                              | 115.2                                                              | 113.9                                | 110.8    | 113.1 | 112.7                             |
| 1994-95                                                  | 113.9      | 116.5                              | 118.1                                                              | 116.2                                | 114.0    | 115.7 | 115.1                             |
| 1995-96                                                  | 118.7      | 121.1                              | 122.4                                                              | 120.6                                | 118.6    | 120.1 | 118.8                             |
| 1996-97                                                  | 120.3      | 123.9                              | 125.2                                                              | 122.5                                | 122.1    | 122.4 | 121.2                             |
| CHANGE FROM PREVIOUS YEAR (%)                            |            |                                    |                                                                    |                                      |          |       |                                   |
| 1991-92                                                  | 1.9        | 3.0                                | 3.6                                                                | 3.1                                  | 1.9      | 2.7   | 3.1                               |
| 1992-93                                                  | 1.0        | 2.0                                | 2.6                                                                | 2.8                                  | 0.9      | 2.3   | 2.0                               |
| 1993-94                                                  | 1.8        | 2.3                                | 2.8                                                                | 2.7                                  | 1.7      | 2.4   | 2.1                               |
| 1994-95                                                  | 3.2        | 2.6                                | 2.5                                                                | 2.0                                  | 2.9      | 2.3   | 2.1                               |
| 1995-96                                                  | 4.2        | 3.9                                | 3.6                                                                | 3.8                                  | 4.0      | 3.8   | 3.2                               |
| 1996-97                                                  | 1.3        | 2.3                                | 2.3                                                                | 1.6                                  | 3.0      | 1.9   | 2.0                               |

(a) Reference base year 1989-90 = 100.0. (b) Comprises the All groups CPI excluding: Fresh fruit and vegetables, Mortgage interest charges, Automotive fuel, and Consumer credit charges. The series covers approximately 85% of the CPI basket.

(c) Comprises the All groups CPI excluding: items in (b), Government-owned dwelling rents, Fuel and light, Local government rates and charges, Postal and telephone services, Motoring charges, Urban transport fares, Health services, Pharmaceuticals, and Education and child care. The resulting series covers approximately 69% of the total CPI basket. (d) Comprises the All groups CPI excluding: items in (b) and (c) (except Motoring charges), Meat and seafoods, Clothing, Tobacco and alcohol, and Holiday travel and accommodation. (e) Index numbers for financial years are calculated as the simple arithmetic averages of the quarterly index numbers.

Source: Consumer Price Index (6401.0).

### Treasury's underlying inflation rate

The Treasury measure of the 'underlying' inflation rate is derived by excluding items from the CPI basket on the basis that changes in their prices are highly volatile; exhibit marked seasonal patterns; or are largely affected by policy decisions. By excluding from the basket those goods and services for which prices are significantly affected by exogenous factors, Treasury's underlying rate seeks to measure price movements which are predominantly influenced by market forces.

The items excluded and the reasons for Treasury's exclusion of them are as follows:

- Meat and seafood. Prices can be highly volatile (particularly in periods of drought) and exhibit a seasonal pattern.
- Fresh fruit and vegetables. Prices can be highly volatile from quarter to quarter, often driven by climatic conditions.
- Clothing. Prices exhibit a seasonal pattern with stronger increases in June and December quarters as a result of the methodology used to deal with seasonal availability of clothing (summer and winter lines).
- Government-owned dwelling rents. Prices are determined by government decisions and are often linked to tenant incomes rather than market determined rentals.
- Mortgage interest charges. These are affected by changes in monetary policy which feed through to mortgage interest rates.
- Local government rates and charges. Price changes mainly reflect revenue raising decisions of local governments.
- Household fuel and light. Price changes mainly reflect decisions made by State Governments.
- Postal and telephone services. Price changes are subject to some degree of regulation by the Commonwealth.
- Consumer credit charges. As for Mortgage interest charges above.
- Automotive fuel. Prices are highly volatile and are also affected by changes in Commonwealth excise and State franchise fees.
- Urban transport fares. Price changes are determined by State and Territory Governments.



- Tobacco and alcohol. Prices are affected by changes in Commonwealth excise and State license fees.
- Health services. Prices can be affected by changes in Medicare arrangements.
- Pharmaceuticals. Prices exhibit a regular seasonal pattern due to the impact of the Pharmaceutical Benefits Scheme safety net scheme, and are also subject to a degree of government regulation.
- Holiday travel and accommodation. Price change is highly seasonal.
- Education and childcare. Price change is highly seasonal.

The items excluded from the CPI basket in order to construct the Treasury measure are listed in table 28.5, together with the weight of each item in the All groups CPI basket at June quarter 1992.

**28.5 ITEMS EXCLUDED FROM THE CPI BASKET, In Constructing the Treasury Measure of Underlying Inflation**

| CPI Item (Group/Sub-group Expenditure class) | Weight in CPI basket |
|----------------------------------------------|----------------------|
| Meat and seafoods                            | 3.001                |
| Fresh fruit and vegetables                   | 1.417                |
| Clothing                                     | 6.264                |
| Government-owned dwelling rents              | 0.382                |
| Mortgage interest charges                    | 6.608                |
| Local government rates and charges           | 2.190                |
| Household fuel and light                     | 2.339                |
| Postal and telephone services                | 1.715                |
| Consumer credit charges                      | 2.498                |
| Automotive fuel                              | 4.698                |
| Urban transport fares                        | 1.212                |
| Tobacco and alcohol                          | 7.475                |
| Health services                              | 3.961                |
| Pharmaceuticals                              | 0.820                |
| Holiday travel and accommodation             | 2.349                |
| Education and childcare                      | 1.939                |
| <b>Total</b>                                 | <b>48.868</b>        |

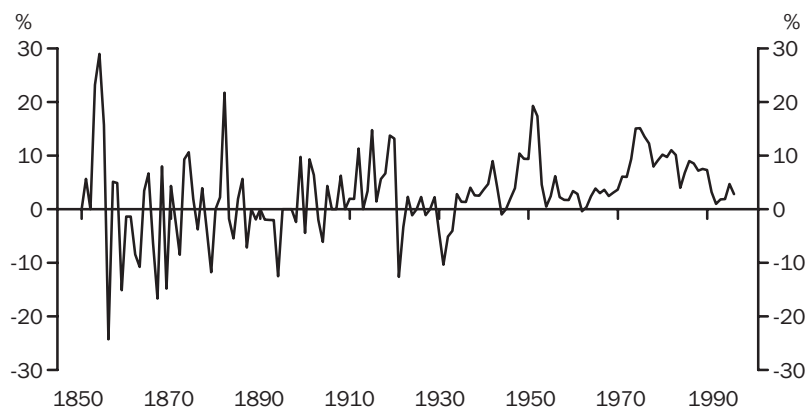
Source: Consumer Price Index, September Quarter 1994 (6401.0).

## Long-term price series

Although the CPI has only been compiled from 1948, an approximate long-term measure of retail price change has been constructed by linking together other selected retail price index series (see graph 28.6 and table 28.7). The index numbers are expressed on a reference base 1945=100.0, which was the end of a period of relative price stability during World War II. The successive series linked together to produce this long-term series of index numbers are:

- from 1850 to 1901, Sydney Retail Price Index;
- from 1901 to 1914, the A Series Index;
- from 1914 to 1946–47, the C Series Index;
- from 1946–47 to 1948–49, a combination of the C Series Index (excluding rent) and the housing group of the CPI; and
- from 1948–49 onwards, the CPI.

**28.6 RETAIL PRICE INDEX, % Change from Previous Year**



Source: ABS, unpublished data, Consumer Price Index.

**28.7 RETAIL PRICE INDEX NUMBERS(a)(b)**

| Year | Index no. | Year | Index no. | Year | Index no. | Year | Index no. | Year | Index no. | Year | Index no. |
|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|
| 1850 | 53        | 1875 | 53        | 1900 | 43        | 1925 | 88        | 1950 | 140       | 1975 | 510       |
| 1851 | 56        | 1876 | 51        | 1901 | 47        | 1926 | 90        | 1951 | 167       | 1976 | 579       |
| 1852 | 56        | 1877 | 53        | 1902 | 50        | 1927 | 89        | 1952 | 196       | 1977 | 650       |
| 1853 | 69        | 1878 | 51        | 1903 | 49        | 1928 | 89        | 1953 | 205       | 1978 | 702       |
| 1854 | 89        | 1879 | 45        | 1904 | 46        | 1929 | 91        | 1954 | 206       | 1979 | 766       |
| 1855 | 103       | 1880 | 45        | 1905 | 48        | 1930 | 87        | 1955 | 211       | 1980 | 844       |
| 1856 | 78        | 1881 | 46        | 1906 | 48        | 1931 | 78        | 1956 | 224       | 1981 | 926       |
| 1857 | 82        | 1882 | 56        | 1907 | 48        | 1932 | 74        | 1957 | 229       | 1982 | 1 028     |
| 1858 | 86        | 1883 | 55        | 1908 | 51        | 1933 | 71        | 1958 | 233       | 1983 | 1 132     |
| 1859 | 73        | 1884 | 52        | 1909 | 51        | 1934 | 73        | 1959 | 237       | 1984 | 1 177     |
| 1860 | 72        | 1885 | 53        | 1910 | 52        | 1935 | 74        | 1960 | 245       | 1985 | 1 257     |
| 1861 | 71        | 1886 | 56        | 1911 | 53        | 1936 | 75        | 1961 | 252       | 1986 | 1 370     |
| 1862 | 65        | 1887 | 52        | 1912 | 59        | 1937 | 78        | 1962 | 251       | 1987 | 1 487     |
| 1863 | 58        | 1888 | 52        | 1913 | 59        | 1938 | 80        | 1963 | 252       | 1988 | 1 594     |
| 1864 | 60        | 1889 | 51        | 1914 | 61        | 1939 | 82        | 1964 | 258       | 1989 | 1 714     |
| 1865 | 64        | 1890 | 51        | 1915 | 70        | 1940 | 85        | 1965 | 268       | 1990 | 1 839     |
| 1866 | 60        | 1891 | 50        | 1916 | 71        | 1941 | 89        | 1966 | 276       | 1991 | 1 898     |
| 1867 | 50        | 1892 | 49        | 1917 | 75        | 1942 | 97        | 1967 | 286       | 1992 | 1 917     |
| 1868 | 54        | 1893 | 48        | 1918 | 80        | 1943 | 101       | 1968 | 293       | 1993 | 1 952     |
| 1869 | 46        | 1894 | 42        | 1919 | 91        | 1944 | 100       | 1969 | 302       | 1994 | 1 989     |
| 1870 | 48        | 1895 | 42        | 1920 | 103       | 1945 | 100       | 1970 | 313       | 1995 | 2 082     |
| 1871 | 47        | 1896 | 42        | 1921 | 90        | 1946 | 102       | 1971 | 332       | 1996 | 2 141     |
| 1872 | 43        | 1897 | 42        | 1922 | 87        | 1947 | 106       | 1972 | 352       | ..   | ..        |
| 1873 | 47        | 1898 | 41        | 1923 | 89        | 1948 | 117       | 1973 | 385       | ..   | ..        |
| 1874 | 52        | 1899 | 45        | 1924 | 88        | 1949 | 128       | 1974 | 443       | ..   | ..        |

(a) Reference base year 1945 = 100.0. (b) The index numbers relate to Sydney from 1850 to 1900; from 1901 to 1980 they relate to the weighted average of six State capital cities and from 1981 to the weighted average of eight capital cities. Index numbers are for calendar years.

Source: ABS, unpublished data, Consumer Price Index.

**International comparisons**

In analysing price movements in Australia, an important consideration is Australia's

performance relative to other countries.

However, due to the many differences in the structure of the housing sector in different countries and in the way that housing is treated

**28.8 CONSUMER PRICE INDEX, International Comparisons(a)(b)**

| Year                           | USA   | Japan | Germany(c) | Canada | UK    | Hong Kong | Republic of Korea | Taiwan | Indonesia | Singapore | Australia | NZ(d) |
|--------------------------------|-------|-------|------------|--------|-------|-----------|-------------------|--------|-----------|-----------|-----------|-------|
| INDEX NO.                      |       |       |            |        |       |           |                   |        |           |           |           |       |
| 1991-92                        | 108.7 | 105.9 | 107.1      | 108.8  | 115.0 | 121.7     | 117.9             | 107.6  | 120.0     | 106.1     | 108.8     | 106.5 |
| 1992-93                        | 112.1 | 106.8 | 110.3      | 110.8  | 118.6 | 130.8     | 123.5             | 111.4  | 129.0     | 108.1     | 111.0     | 108.7 |
| 1993-94                        | 114.8 | 107.9 | 113.2      | 112.0  | 122.0 | 140.1     | 130.4             | 114.2  | 137.8     | 110.9     | 113.5     | 109.4 |
| 1994-95                        | 118.0 | 107.8 | 115.2      | 113.4  | 124.8 | 151.4     | 138.0             | 119.1  | 150.3     | 114.5     | 116.5     | 110.5 |
| 1995-96                        | 120.9 | 107.3 | 116.3      | 116.0  | 128.3 | 160.8     | 144.4             | 122.5  | 163.7     | 116.0     | 121.1     | 111.9 |
| 1996-97                        | 124.3 | 108.2 | 117.7      | 118.8  | 131.5 | 168.2     | 151.3             | 125.7  | 174.1     | 118.1     | 123.9     | 113.7 |
| CHANGE SINCE PREVIOUS YEAR (%) |       |       |            |        |       |           |                   |        |           |           |           |       |
| 1991-92                        | 3.0   | 2.4   | 4.3        | 3.1    | 6.8   | 9.8       | 8.1               | 3.5    | 10.4      | 2.7       | 3.0       | 2.4   |
| 1992-93                        | 3.1   | 0.8   | 3.0        | 1.8    | 3.1   | 7.5       | 4.7               | 3.5    | 7.5       | 1.9       | 2.0       | 2.1   |
| 1993-94                        | 2.4   | 1.0   | 2.6        | 1.1    | 2.9   | 7.1       | 5.6               | 2.5    | 6.8       | 2.6       | 2.3       | 0.6   |
| 1994-95                        | 2.8   | -0.1  | 1.8        | 1.3    | 2.3   | 8.1       | 5.8               | 4.3    | 9.1       | 3.2       | 2.6       | 1.0   |
| 1995-96                        | 2.5   | -0.5  | 1.0        | 2.3    | 2.8   | 6.2       | 4.6               | 2.9    | 8.9       | 1.3       | 3.9       | 1.3   |
| 1996-97                        | 2.8   | 0.8   | 1.2        | 2.4    | 2.5   | 4.6       | 4.8               | 2.6    | 6.4       | 1.8       | 2.3       | 1.6   |

(a) Reference base year 1989-90 = 100.0. (b) All groups excluding housing. (c) The statistics for Germany refer to Western Germany (Federal Republic of Germany before the unification of Germany). (d) From March quarter 1994 the statistics for New Zealand refer to 'all groups excluding housing and credit services'.

Source: Consumer Price Index (6401.0).



in their CPIs, a simple comparison of All groups (or headline) CPIs is often inappropriate. As indicated earlier, in order to provide a better basis for international comparisons, the Fourteenth International Conference of Labour Statisticians adopted a resolution which called for countries to 'provide for dissemination at the international level of an index which excludes shelter, in addition to the all items index.'

Table 28.8 presents indexes for selected countries on a basis consistent with the above resolution and comparable with the Australian series 'All groups excluding housing'.

## Producer Price Indexes

The Producer Price Indexes measure changes in prices received, or paid, by producers of commodities. Specifically, in Australia they relate to prices for goods as they enter and leave the manufacturing sector and for goods entering the building industry. This contrasts with the Consumer Price Index which measures changes in the retail prices paid by consumers, as explained earlier in this chapter.

## Long-term price series

Table 28.9 presents a set of producer price indexes for the years 1861 to 1996–97. The indexes comprise the linked wholesale price indexes from 1861 to 1967–68 and the producer price index for manufacturing from 1968–69 onwards. These indexes are discussed below.

The first price index of this kind compiled by the ABS was the Melbourne Wholesale Price Index, which was introduced in 1912 with index numbers compiled back to 1861 from prices extracted from newspapers and trade publications. Index numbers were compiled up to 1961. The index related chiefly to basic materials and foods weighted in accordance with consumption in about the year 1910.

The next index published was the Wholesale Price (Basic Materials and Foodstuffs) Index which was introduced in 1939; index numbers are available for the period 1928 to 1970. The index related to commodities in their basic or primary form, and prices were obtained as near as possible to the point where they made their first effective impact on the local price structure. With few exceptions, prices were obtained from Melbourne sources.

## 28.9 PRODUCER AND WHOLESALE PRICE INDEXES(a)

|                                                                     | Producer Price Indexes |
|---------------------------------------------------------------------|------------------------|
| Melbourne Wholesale Price Index (All groups)                        |                        |
| 1861                                                                | 24.2                   |
| 1871                                                                | 19.3                   |
| 1881                                                                | 17.6                   |
| 1891                                                                | 14.9                   |
| 1901                                                                | 15.3                   |
| 1911                                                                | 15.7                   |
| 1921                                                                | 30.0                   |
| 1925–26                                                             | 29.7                   |
| Wholesale Price (Basic Materials and Foodstuffs) Index (All groups) |                        |
| 1930–31                                                             | 25.4                   |
| 1935–36                                                             | 23.9                   |
| 1940–41                                                             | 29.3                   |
| 1945–46                                                             | 36.5                   |
| 1950–51                                                             | 62.7                   |
| 1955–56                                                             | 85.9                   |
| 1960–61                                                             | 92.5                   |
| 1961–62                                                             | 86.4                   |
| 1962–63                                                             | 87.4                   |
| 1963–64                                                             | 90.0                   |
| 1964–65                                                             | 91.3                   |
| 1965–66                                                             | 95.4                   |
| 1966–67                                                             | 98.4                   |
| 1967–68                                                             | 99.7                   |
| Price Index of Articles Produced by Manufacturing Industry          |                        |
| 1968–69                                                             | 100.0                  |
| 1969–70                                                             | 103.9                  |
| 1970–71                                                             | 108.5                  |
| 1971–72                                                             | 113.9                  |
| 1972–73                                                             | 120.7                  |
| 1973–74                                                             | 134.6                  |
| 1974–75                                                             | 158.1                  |
| 1975–76                                                             | 177.8                  |
| 1976–77                                                             | 196.9                  |
| 1977–78                                                             | 213.8                  |
| 1978–79                                                             | 237.4                  |
| 1979–80                                                             | 274.9                  |
| 1980–81                                                             | 305.2                  |
| 1981–82                                                             | 328.9                  |
| 1982–83                                                             | 360.2                  |
| 1983–84                                                             | 382.8                  |
| 1984–85                                                             | 404.8                  |
| 1985–86                                                             | 430.3                  |
| 1986–87                                                             | 458.5                  |
| 1987–88                                                             | 492.1                  |
| 1988–89                                                             | 526.0                  |
| 1989–90                                                             | 559.9                  |
| 1990–91                                                             | 584.6                  |
| 1991–92                                                             | 586.7                  |
| 1992–93                                                             | 600.9                  |
| 1993–94                                                             | 607.3                  |
| 1994–95                                                             | 620.9                  |
| 1995–96                                                             | 636.7                  |
| 1996–97                                                             | 639.9                  |

(a) Reference base year 1968–69 = 100.0.

Source: Labour Report; Price Indexes of Articles Produced by Manufacturing Industry, Australia (6412.0).

The present range of producer price indexes was developed and produced progressively from the 1960s. The current indexes relate to the building industry, manufacturing industry, and (not included in this chapter) the mining industry. The current set of producer price indexes is somewhat restricted in scope, being confined to the measurement of prices for goods used in or produced by the selected industries. As part of a long term program, the ABS has started expanding the coverage of the producer price indexes to include the measurement of price changes for the output of the service industries. This expansion in coverage is being undertaken in parallel with a move towards the implementation of a 'stage of production' framework for the producer price indexes, to supplement the current industry sector approach.

## Construction prices indexes

### Price Index of Materials Used in House Building

The Price Index of Materials Used in House Building measures changes in prices of selected materials used in the construction of houses in the Statistical Division containing each State capital city. The current index series were introduced in December 1995 on a reference base of 1989–90 = 100.0 and were linked to the previous series. The items and weights for the current series are based on estimated materials usage in a sample of representative houses constructed in the three years ending 1992–93.

The index was first compiled on a reference base of 1966–67 = 100.0, using a weighting pattern derived from estimated materials usage in

1968–69. Index numbers on a 1966–67 = 100.0 reference base are available for the period July 1966 to September 1986.

Rebased series of indexes were then introduced in October 1986 on a reference base of 1985–86 = 100.0 and were linked to the previous series. The items in this rebased series were selected and allocated weights on the basis of the estimated values of each material used in a sample of representative houses constructed in 1985–86.

### Price Index of Materials Used in Building Other than House Building

The Price Index of Materials Used in Building Other than House Building measures changes in prices of selected materials used in the construction of buildings other than houses in metropolitan areas. The types of building directly represented in the index are: flats and other dwellings; hotels, motels and hostels; shops; factories; offices; other business premises; education buildings; health buildings; and other non-residential buildings.

The current index series were introduced in October 1993 on a reference base of 1989–90 = 100.0. The composition of these indexes reflects the usage of materials in the five years ending June 1992.

The index was first compiled on a reference base of 1966–67 = 100.0 using a weighting pattern derived from estimated materials usage in 1966–67. Rebased indexes for the six State capital cities were introduced in February 1981 on a reference base of 1979–80 = 100.0. The composition of these indexes reflected the usage of materials in the three years ending June 1977.

**28.10 PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING, Six State Capital Cities(a)(b)**

| Year    | Weighted<br>average of six<br>State capital cities | Sydney | Melbourne | Brisbane | Adelaide | Perth | Hobart |
|---------|----------------------------------------------------|--------|-----------|----------|----------|-------|--------|
| 1991–92 | 104.9                                              | 105.0  | 102.8     | 107.9    | 104.5    | 106.0 | 108.0  |
| 1992–93 | 106.9                                              | 106.8  | 105.7     | 110.2    | 106.3    | 106.9 | 109.9  |
| 1993–94 | 112.0                                              | 111.3  | 112.1     | 113.5    | 117.1    | 109.1 | 112.8  |
| 1994–95 | 115.4                                              | 115.0  | 115.9     | 115.9    | 118.8    | 112.7 | 117.3  |
| 1995–96 | 115.7                                              | 115.9  | 115.4     | 115.1    | 118.2    | 114.7 | 120.7  |
| 1996–97 | 116.1                                              | 116.3  | 115.3     | 115.3    | 120.6    | 115.3 | 120.2  |

(a) Reference base year 1989–90 = 100.0. (b) The separate city indexes measure price movement within each city individually. They do not compare price levels between cities.

Source: *Price Index of Materials Used in House Building, Six State Capital Cities (6408.0)*.

**28.11 PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING, Six State Capital Cities(a)(b)**

| Year    | Weighted<br>average of six<br>State capital cities | Sydney | Melbourne | Brisbane | Adelaide | Perth | Hobart |
|---------|----------------------------------------------------|--------|-----------|----------|----------|-------|--------|
| 1991–92 | 105.7                                              | 107.2  | 103.4     | 107.4    | 105.4    | 105.2 | 107.1  |
| 1992–93 | 106.0                                              | 106.5  | 104.4     | 108.9    | 105.1    | 105.7 | 108.2  |
| 1993–94 | 107.5                                              | 107.0  | 106.7     | 110.1    | 107.9    | 107.1 | 110.1  |
| 1994–95 | 110.4                                              | 110.3  | 108.9     | 112.9    | 110.9    | 110.1 | 112.2  |
| 1995–96 | 112.7                                              | 112.5  | 111.1     | 115.0    | 112.7    | 113.2 | 115.1  |
| 1996–97 | 113.2                                              | 113.0  | 110.9     | 115.9    | 114.1    | 114.6 | 116.3  |

(a) Reference base year 1989–90 = 100.0. (b) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

Source: *Price Index of Materials Used in Building Other than House Building, Six State Capital Cities (6407.0)*.

Table 28.11 shows price index series for the six years 1991–92 to 1996–97, for the weighted average of the six State capital cities and for the individual cities.

A table setting out more detailed information in respect of individual building materials is contained in *Chapter 20, Construction*.

## Manufacturing price indexes

### Price Indexes of Materials Used in Manufacturing Industries

These indexes measure changes in prices of materials used by establishments classified to the Manufacturing Division of the Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993 edition.

Separate price indexes are published for materials used in the Manufacturing Industry as a whole (split into imported and domestic materials) and for 17 separate Manufacturing sectors (defined in terms of ANZSIC subdivisions or ANZSIC groups).

The indexes are compiled and published on a net sector basis, that is, each index includes only those materials which are used in the defined sector of Australian manufacturing industry and which have been produced by establishments outside that sector.

The current index series were introduced in July 1996 on a reference base of 1989–90 = 100.0. The items included in the indexes were allocated weights in accordance with the estimated value of manufacturing usage in 1989–90.

The indexes were first compiled on a reference base of 1968–69 = 100.0, using a weighting pattern derived from estimated manufacturing

usage in 1971–72. Index numbers for this first series are available for the period July 1968 to November 1985.

A rebased series was introduced in December 1985 on a reference base of 1984–85 = 100.0 using a weighting pattern based on estimated manufacturing usage in 1977–78.

**28.12 PRICE INDEXES OF MATERIALS USED IN MANUFACTURING INDUSTRIES(a)(b)**

| Year    | Imported<br>materials | Domestic<br>materials | All materials |
|---------|-----------------------|-----------------------|---------------|
| 1991–92 | 101.8                 | 101.2                 | 101.4         |
| 1992–93 | 107.8                 | 105.7                 | 106.4         |
| 1993–94 | 108.8                 | 102.5                 | 104.7         |
| 1994–95 | 112.7                 | 104.9                 | 107.6         |
| 1995–96 | 117.6                 | 105.9                 | 110.0         |
| 1996–97 | 109.3                 | 104.2                 | 106.0         |

(a) Reference base year 1989–90 = 100.0. (b) The index is on a net basis and relates in concept only to materials that enter Australian manufacturing industry from other sectors of the Australian economy or from overseas.

Source: *Price Indexes of Materials Used in Manufacturing Industries, Australia (6411.0)*.

### Price Indexes of Articles Produced by Manufacturing Industries

These indexes measure movements in the prices of articles produced by manufacturing industry. For the purpose of the indexes, manufacturing industry is defined to be establishments classified to the Manufacturing Division of the Australian Standard Industrial Classification (ASIC), 1983 edition.

Separate price indexes are published for articles produced by the Manufacturing Industry as a

whole and for 13 separate Manufacturing sectors (defined in terms of ASIC subdivisions or ASIC groups).

The indexes are constructed on a net sector basis. This approach means that the All Manufacturing Industry Index represents price movements of goods which are produced by establishments in the Manufacturing Division, for sale or transfer to establishments outside the Manufacturing Division, for export, or for use as capital equipment. Articles which are sold or transferred to other establishments within manufacturing industry, for further processing or for use as inputs, are excluded.

The current indexes were introduced from May 1990. The composition and weighting pattern are based on the value of production in 1986–87 and the indexes are on a reference base of 1988–89 = 100.0.

Tables setting out more detailed index numbers for both materials used and articles produced are contained in *Chapter 19, Manufacturing*.

The indexes were first published in June 1976 on a reference base of 1968–69 = 100.0, with indexes compiled retrospectively to July 1968. The composition and weighting patterns of the indexes were based on the value of production in 1971–72.

### 28.13 PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRIES(a)(b)

| Year    | Manufacturing division index |
|---------|------------------------------|
| 1991–92 | 111.6                        |
| 1992–93 | 114.3                        |
| 1993–94 | 115.5                        |
| 1994–95 | 118.1                        |
| 1995–95 | 121.1                        |
| 1996–97 | 121.7                        |

(a) Reference base year 1988–89 = 100.0. (b) For a full description of Division C, Manufacturing and the subdivisions within the Manufacturing Division, see Australian Standard Industrial Classification (ASIC) (1201.0), 1983 edition.

Source: *Price Indexes of Articles Produced by Manufacturing Industry, Australia* (6412.0).

## International trade price indexes

### Export Price Index

The Export Price Index measures changes in prices of exports of merchandise from Australia. The index numbers for each month relate to prices of exports actually shipped during the period.

The first index of export prices was compiled annually from 1901 to 1916–17 as a current weighted unit value index.

The method of calculation was changed in 1918 to incorporate fixed weights, applied to the average unit values of each export in successive years. This index was published for the years 1897 to 1929–30.

Two new series of monthly export price indexes were published in 1937, compiled back to 1928. One index used fixed weights and the other used changing weights. The methodology was changed and actual export prices were used instead of unit values. The indexes were compiled until 1962.

In 1962, a fixed weighted index on the reference base of 1959–60 = 100.0 was introduced. A new interim series was linked to this index, still with a reference base of 1959–60 = 100.0, but with updated weights from July 1969. The interim index was replaced in 1979 by an index on a reference base of 1974–75. The current index with a reference base of 1989–90 = 100.0 was released in 1990.

### Import Price Index

The Import Price Index measures changes in the prices of imports of merchandise landed in Australia on a free-on-board country of origin basis. The index numbers for each month relate to prices of imports landed in Australia during the period.

The first import price index produced by the ABS covered the period from September quarter 1981 to June quarter 1991 on a reference base of 1981–82 = 100.0. This index replaced an index previously published by the Reserve Bank of Australia on a reference base of 1966–67 = 100.0. The Reserve Bank's import price index was published from 1928 until September 1982.

The current Import Price Index series was introduced in December 1991 with index numbers compiled from April 1991 onwards, on a reference base of 1989–90 = 100.0.

To give a broad indication of long-term changes, table 28.14 draws on the available international trade indexes.

Tables setting out more detailed index numbers for both imports and exports are contained in *Chapter 30, International accounts and trade*.

**28.14 INTERNATIONAL TRADE PRICE INDEXES(a)**

| Year    | Export Price Index<br>(All groups) | Import Price Index<br>(All groups) |
|---------|------------------------------------|------------------------------------|
| 1901    | 15                                 | ..                                 |
| 1911    | 17                                 | ..                                 |
| 1921–22 | 25                                 | ..                                 |
| 1931–32 | 18                                 | 22                                 |
| 1936–37 | 29                                 | 21                                 |
| 1941–42 | 27                                 | 35                                 |
| 1946–47 | 53                                 | 51                                 |
| 1951–52 | 123                                | 92                                 |
| 1956–57 | 115                                | 91                                 |
| 1960–61 | 93                                 | 95                                 |
| 1961–62 | 94                                 | 94                                 |
| 1962–63 | 99                                 | 94                                 |
| 1963–64 | 112                                | 96                                 |
| 1964–65 | 103                                | 97                                 |
| 1965–66 | 105                                | 99                                 |
| 1966–67 | 103                                | 100                                |
| 1967–68 | 98                                 | 99                                 |
| 1968–69 | 100                                | 100                                |
| 1969–70 | 101                                | 103                                |
| 1970–71 | 99                                 | 108                                |
| 1971–72 | 102                                | 114                                |
| 1972–73 | 131                                | 113                                |
| 1973–74 | 157                                | 131                                |
| 1974–75 | 177                                | 189                                |
| 1975–76 | 193                                | 214                                |
| 1976–77 | 216                                | 246                                |
| 1977–78 | 227                                | 278                                |
| 1978–79 | 256                                | 307                                |
| 1979–80 | 309                                | 403                                |
| 1980–81 | 328                                | 450                                |
| 1981–82 | 332                                | 458                                |
| 1982–83 | 360                                | 506                                |
| 1983–84 | 369                                | 524                                |
| 1984–85 | 396                                | 580                                |
| 1985–86 | 417                                | 659                                |
| 1986–87 | 430                                | 731                                |
| 1987–88 | 469                                | 742                                |
| 1988–89 | 501                                | 694                                |
| 1989–90 | 527                                | 729                                |
| 1990–91 | 501                                | 752                                |
| 1991–92 | 472                                | 749                                |
| 1992–93 | 493                                | 817                                |
| 1993–94 | 484                                | 843                                |
| 1994–95 | 501                                | 837                                |
| 1995–96 | 508                                | 838                                |
| 1996–97 | 488                                | 791                                |

(a) Reference base year 1968–69 = 100.0.

Source: The sources used for the Import Price Index are the Reserve Bank of Australia Bulletin up to and including 1981–82, and the ABS Import Price Index, Australia (6414.0) thereafter. The source used for the Export Price Index is the ABS Export Price Index, Australia (6405.0).

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## Introduction

In Australia there is a wide range of economic data available to analyse the performance of various components of the economy over time. For example, data are regularly published on the number of houses being built, the number of cars produced, whether employment is rising or falling, the composition of exports and imports and so on. While these and other statistical series are important in their own right, none of them in isolation can provide an overall picture of the state of the economy.

National accounts are designed to provide a systematic summary of national economic activity, and have been developed to assist in the practical application of economic theory. At their summary level, the national income, expenditure and product accounts reflect the key economic flows of the Keynesian economic system: production, the distribution of incomes, consumption, saving and investment. At their more detailed level, they are designed to present a statistical picture of the structure of the economy and the detailed processes that make up domestic production and its distribution. The national accounts include many detailed classifications (e.g. by industry, by purpose, by commodity, by State and Territory, and by asset type) relating to major economic aggregates.

The performance of the economy, as represented in national accounting measures such as growth in the national income or Gross Domestic Product (GDP), is not an end in itself. Movements in GDP at constant prices are an important measure of economic growth, but there is no single indicator which can describe all aspects of the wellbeing of a country's citizens.

There are significant aspects of the quality of life which cannot be comprehended in a system of economic accounts, just as there are significant aspects of an individual's wellbeing which are not measured in the conventional concept (or any other concept) of that individual's income.

Notwithstanding their limitations, especially in relation to uses for which they were never designed, the national accounts provide vital information for a range of important purposes. The system of national accounts also provides a framework or structure which can be, and has been, adapted and extended to facilitate the examination of other economic and social policy issues.

A detailed presentation of the concepts underlying the national accounts is provided in the ABS publication *Australian National Accounts: Concepts, Sources and Methods* (5216.0). This publication, updated in 1996, forms part of the *Statistical Concepts Reference Library* (1361.0.30.001) on CD-ROM.

The main output from the national accounts is a measure of the overall value of economic production in Australia in a given period, but without any double counting of the goods and services being produced. Many goods and services are bought by businesses for use in their own productive activities (e.g. steel is bought by car manufacturers). If the value of all goods and services produced were simply added together there would be serious duplication because some goods and services would be added in several times at various stages of production. The overall measure of production, excluding double counting, is called gross domestic product, which is commonly referred to as GDP. It is formally defined as:

“the total market value of goods and services produced in Australia after deducting the cost of goods and services used up (intermediate consumption) in the process of production, but before deducting allowances for the consumption of fixed capital (depreciation).”

## Measurement of GDP

There are three ways of measuring GDP:

- The *income approach*, which measures GDP by summing the incomes accruing from production (wages, salaries and supplements; gross operating surplus (GOS) (profits); and indirect taxes less subsidies).
- The *expenditure approach*, which involves summing all final expenditures on goods and services (i.e. those goods and services which are not processed any further), adding on the contribution of exports and deducting the value of imports. Final expenditures consist of final consumption expenditure, gross fixed capital expenditure and increase in stocks. Exports are included in GDP because they are part of Australian production even though they are sold to overseas purchasers. Imports are deducted because, although they are included in final expenditures (e.g. when someone buys an imported video recorder its value is included as part of private final consumption expenditure) they are not part of Australian production.

- The *production approach* calculates GDP by taking the market value of goods and services produced by an industry (its gross output) and deducting the cost of goods and services used up by the industry in the productive process (intermediate consumption), which leaves the value added by the industry (also called its gross product). GDP is then obtained by summing the gross product of all industries.

In theory, the three approaches result in identical estimates of GDP. In practice, because of the need to use different data sources for each method, the value of GDP obtained from each approach differs. The ABS refers to the above three alternative estimates of GDP as GDP(I), GDP(E) and GDP(P), respectively. Table 29.1 shows time series at constant prices for each of these measures of GDP from 1962–63 to 1996–97.

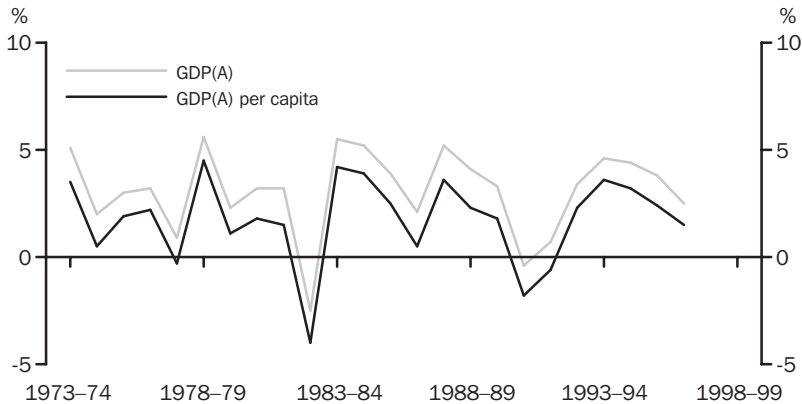
### 29.1 GROSS DOMESTIC PRODUCT(a)

|         | GDP(I)  | GDP(E)  | GDP(P)  | GDP(A)  |
|---------|---------|---------|---------|---------|
| Year    | \$m     | \$m     | \$m     | \$m     |
| 1962–63 | 128 107 | 128 270 | 127 630 | 128 280 |
| 1963–64 | 137 179 | 137 240 | 136 239 | 137 183 |
| 1964–65 | 146 873 | 145 937 | 145 931 | 146 566 |
| 1965–66 | 150 065 | 149 307 | 147 849 | 149 396 |
| 1966–67 | 159 935 | 159 608 | 157 089 | 159 220 |
| 1967–68 | 165 902 | 166 196 | 164 065 | 165 746 |
| 1968–69 | 180 497 | 180 349 | 179 278 | 180 432 |
| 1969–70 | 190 616 | 189 776 | 188 639 | 190 088 |
| 1970–71 | 199 757 | 199 983 | 196 790 | 199 272 |
| 1971–72 | 209 421 | 208 777 | 202 882 | 207 469 |
| 1972–73 | 217 476 | 216 091 | 209 317 | 214 751 |
| 1973–74 | 227 577 | 223 062 | 225 006 | 225 705 |
| 1974–75 | 231 878 | 228 454 | 228 647 | 230 158 |
| 1975–76 | 238 697 | 238 493 | 232 507 | 237 073 |
| 1976–77 | 245 608 | 245 826 | 241 157 | 244 723 |
| 1977–78 | 248 136 | 247 320 | 243 879 | 246 976 |
| 1978–79 | 261 960 | 263 273 | 255 828 | 260 912 |
| 1979–80 | 267 404 | 269 584 | 261 980 | 266 894 |
| 1980–81 | 276 829 | 277 258 | 270 715 | 275 523 |
| 1981–82 | 283 135 | 286 280 | 281 323 | 284 192 |
| 1982–83 | 278 291 | 280 027 | 271 179 | 277 091 |
| 1983–84 | 295 184 | 295 302 | 284 701 | 292 350 |
| 1984–85 | 310 197 | 308 901 | 303 509 | 307 535 |
| 1985–86 | 321 561 | 322 361 | 314 922 | 319 616 |
| 1986–87 | 329 310 | 329 716 | 319 468 | 326 164 |
| 1987–88 | 345 483 | 345 325 | 339 003 | 343 270 |
| 1988–89 | 359 212 | 354 804 | 357 775 | 357 264 |
| 1989–90 | 370 044 | 366 990 | 370 044 | 369 026 |
| 1990–91 | 367 752 | 365 719 | 369 571 | 367 680 |
| 1991–92 | 368 938 | 372 482 | 369 254 | 370 224 |
| 1992–93 | 381 046 | 386 276 | 381 388 | 382 903 |
| 1993–94 | 399 557 | 402 622 | 399 392 | 400 523 |
| 1994–95 | 418 830 | 416 856 | 418 208 | 417 964 |
| 1995–96 | 433 892 | 433 322 | 433 854 | 433 688 |
| 1996–97 | 445 922 | 442 397 | 445 605 | 444 641 |

(a) At average 1989–90 prices.

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0 and 5206.0).

## 29.2 GDP(A) AND GDP(A) PER CAPITA



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

A fourth measure, the simple average of these three, referred to as GDP(A), is the preferred estimate of economic growth for Australia when expressed in constant price terms. Using movements in GDP(A) has been shown to provide a smoother and more reliable indicator of turning points in the economy than do changes in any of the individual measures of GDP. Quarterly changes in the constant price trend of GDP(A) are considered by the ABS to be the best indicator of short-term growth. Constant price data are published for all four estimates in original, seasonally adjusted and trend terms (see *Constant price or 'real' GDP* below).

GDP(A) at average 1989–90 prices increased by 2.5% in 1996–97 following an increase of 3.8% in 1995–96. For some analytical purposes it is important to allow for the impact of population growth on movements in GDP. Annual growth in GDP(A) per capita has been about 1 to 1.8 percentage points lower than that for GDP(A) since 1973–74 and was negative in 1977–78, 1982–83, 1990–91 and 1991–92 (graph 29.2).

### Constant price or 'real' GDP

The expenditure approach to calculating GDP measures Australian production by summing the amounts spent by the final users on the goods and services produced. However, by itself this is not always a good measure of production, since the value of a particular good or service is affected by inflation.

For example, the national accounts may show that the amount spent on motor cars is 5% higher this year than it was last year. If the price of cars has increased by 5% over the last year, then the number of cars bought will not have changed — expenditure has risen only because the price of cars has risen.

For a lot of uses, it is necessary to know how much physical production (e.g. the number of cars made) has changed, rather than just the current (or dollar) value of production. Constant price estimates are the way in which this is achieved. They provide a measure, in dollar values, which indicates changes in the actual quantity of items produced or purchased. Because of this, constant price estimates of GDP are often referred to as estimates of real GDP.

In essence, estimates of GDP at constant prices involve finding indicators of price changes in the items included in the national accounts, and using these to remove the effects of inflation from the estimates of GDP. Constant price estimates are expressed in terms of the average prices prevailing in a selected base year (currently 1989–90). Some of the main indicators used in this process are the component series from the Consumer Price Index, which measures changes over time in the price of a basket of goods and services bought by households. Other price indexes produced by the ABS (such as the Import Price Index) are also used extensively in compiling the constant price estimates.

## Implicit price deflators

A by-product of the calculation of constant price estimates is the Implicit Price Deflator (IPD). An IPD is the price index obtained when a current price estimate is divided by the corresponding constant price estimate. The ABS publishes a time series of IPDs for each of the expenditure side aggregates (excluding increase in stocks) in the domestic production account.

IPDs calculated from the major national accounting aggregates such as gross national expenditure are widely used as a broader measure of inflation in the economy than that available from any of the individual price indexes published by the ABS. However, care has to be taken in the interpretation of IPDs as they do not compare the price of a constant basket of goods between any two periods except when comparing the base period with another period. Therefore, they reflect a combination of the effects of actual price changes and changes in the composition of the aggregate from which the deflator is derived. An alternative set of price indexes, based on the expenditure side of the domestic production account, is fixed-weighted price indexes for the major expenditure aggregates. They measure the change in price of the basket of goods and services included in GDP in the proportions measured in 1989–90.

## National income, expenditure and product accounts

The Australian national income, expenditure and product accounts are compiled and published in some detail every quarter, in *Australian National Accounts: National Income, Expenditure and Product* (5206.0), and in greater detail once a year, in *Australian National Accounts: National Income, Expenditure and Product* (5204.0).

## Domestic production account

The domestic production account indicates changes in Australian production over time. Tables 29.3 and 29.4 show the domestic production account in current prices for a number of years between 1962–63 and 1996–97; table 29.3 shows a series of snapshots at five-yearly intervals to 1982–83, while table 29.4 shows annual time series from 1988–89 to 1996–97. Tables 29.5 and 29.6 show the same series, for the same years, at average 1989–90 prices.

**29.3 DOMESTIC PRODUCTION ACCOUNT, Five-Yearly**

|                                         | 1962–63       | 1967–68       | 1972–73       | 1977–78       | 1982–83        |
|-----------------------------------------|---------------|---------------|---------------|---------------|----------------|
|                                         | \$m           | \$m           | \$m           | \$m           | \$m            |
| Final consumption expenditure           |               |               |               |               |                |
| Private                                 | 10 658        | 15 677        | 26 001        | 56 933        | 105 965        |
| Government                              | 1 995         | 3 711         | 6 357         | 17 272        | 32 474         |
| Private gross fixed capital expenditure | 2 800         | 4 496         | 7 726         | 15 455        | 27 985         |
| Public gross fixed capital expenditure  | 1 331         | 2 178         | 3 270         | 7 194         | 13 120         |
| Increase in stocks                      | 253           | 113           | –270          | –430          | –2 437         |
| <i>Gross national expenditure</i>       | <i>17 037</i> | <i>26 175</i> | <i>43 084</i> | <i>96 424</i> | <i>177 107</i> |
| Exports of goods and services           | 2 483         | 3 559         | 7 017         | 14 236        | 25 540         |
| Imports of goods and services           | 2 596         | 4 115         | 5 392         | 15 179        | 29 062         |
| <b>Gross domestic product (GDP(E))</b>  | <b>16 924</b> | <b>25 619</b> | <b>44 709</b> | <b>95 481</b> | <b>173 585</b> |
| Statistical discrepancy                 | –83           | –136          | 84            | –173          | –1 109         |
| Wages, salaries and supplements         | 8 361         | 13 212        | 23 562        | 53 066        | 94 949         |
| Gross operating surplus                 |               |               |               |               |                |
| Trading enterprises                     | 6 687         | 9 527         | 16 586        | 31 773        | 56 886         |
| Total                                   | 6 850         | 9 812         | 17 125        | 32 686        | 58 021         |
| Indirect taxes less subsidies           | 1 630         | 2 459         | 4 106         | 9 556         | 19 506         |
| <b>Gross domestic product (GDP(I))</b>  | <b>16 841</b> | <b>25 483</b> | <b>44 793</b> | <b>95 308</b> | <b>172 476</b> |

Source: *Australian National Accounts: National Income, Expenditure and Product* (5204.0).

## 29.4 DOMESTIC PRODUCTION ACCOUNT, Annual

|                                         | 1988–89 | 1989–90 | 1990–91 | 1991–92 | 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|-----------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                                         | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     |
| Final consumption expenditure           |         |         |         |         |         |         |         |         |         |
| Private                                 | 195 283 | 216 853 | 229 890 | 242 253 | 254 447 | 267 063 | 283 656 | 302 644 | 314 289 |
| Government                              | 56 719  | 61 587  | 66 633  | 71 449  | 74 443  | 77 181  | 79 819  | 83 941  | 86 599  |
| Private gross fixed capital expenditure | 67 202  | 67 821  | 60 547  | 56 758  | 62 932  | 70 082  | 77 048  | 78 622  | 84 745  |
| Public gross fixed capital expenditure  | 17 949  | 21 652  | 20 789  | 20 591  | 19 372  | 18 184  | 20 422  | 19 509  | 18 642  |
| Increase in stocks                      | 3 510   | 5 379   | –1 377  | –2 043  | 593     | 1 272   | 2 785   | 3 047   | –1 357  |
| Gross national expenditure              | 340 663 | 373 292 | 376 482 | 389 008 | 411 787 | 433 782 | 463 730 | 487 763 | 502 918 |
| Exports of goods and services           | 55 093  | 60 587  | 65 833  | 69 458  | 76 186  | 82 566  | 86 832  | 98 062  | 104 366 |
| Imports of goods and services           | 60 690  | 66 889  | 65 118  | 67 224  | 77 041  | 83 384  | 95 421  | 98 828  | 101 548 |
| Gross domestic product (GDP(E))         | 335 066 | 366 990 | 377 197 | 391 242 | 410 932 | 432 964 | 455 141 | 486 997 | 505 736 |
| Statistical discrepancy                 | 4 122   | 3 054   | 2 091   | –3 713  | –5 557  | –3 284  | 2 153   | 628     | 4 036   |
| Wages, salaries and supplements         | 163 692 | 182 181 | 190 234 | 194 245 | 201 273 | 211 648 | 225 452 | 240 724 | 256 209 |
| Gross operating surplus                 |         |         |         |         |         |         |         |         |         |
| Trading enterprises                     | 133 405 | 143 612 | 143 720 | 147 804 | 154 858 | 163 068 | 172 898 | 184 350 | 188 369 |
| Total                                   | 134 291 | 143 406 | 144 414 | 148 989 | 158 382 | 167 141 | 175 505 | 186 059 | 189 955 |
| Indirect taxes less subsidies           | 41 205  | 44 457  | 44 640  | 44 295  | 45 720  | 50 891  | 56 337  | 60 842  | 63 608  |
| Gross domestic product (GDP(I))         | 339 188 | 370 044 | 379 288 | 387 529 | 405 375 | 429 680 | 457 294 | 487 625 | 509 772 |

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0 and 5206.0).

Table 29.6 shows that, in real terms (i.e. after the effects of inflation are removed from the dollar value of Australia's production), there was a fall in production during the 1990–91 financial year. However, the six years since the recession in 1990–91 have all shown growth in GDP. Although growth in 1991–92, as measured by GDP(I), was relatively low (0.3%), by 1993–94 it had accelerated to 4.9% and in 1996–97 it was 2.8%.

The domestic production account can also be used to show changes in the share of income accruing to labour (i.e. wages, salaries and supplements) compared with the share accruing to capital (i.e. profits). Graphs 29.7 and 29.8 show how the shares of each of wages and profits (defined as the gross operating surplus of

private corporate trading enterprises) to GDP(I) at factor cost have changed since 1963–64.

The highest recorded value of the wages share of GDP(I) at factor cost was 63.5% in 1974–75. The wages share has recovered slightly from its recent low value of 54.9% in 1988–89, but remains at a relatively low level compared with most of the 1970s and early 1980s.

The profits share of GDP(I) at factor cost fell to 13.6% during the 1982–83 recession but recovered to around 17% by 1984–85, a level it broadly maintained until the 1990–91 recession, during which it fell to just over 16%. In 1996–97, this ratio was 17.1%.

**29.5 DOMESTIC PRODUCTION ACCOUNT, At Constant Prices(a) — Five-Yearly**

|                                         | 1962–63        | 1967–68        | 1972–73        | 1977–78        | 1982–83        |
|-----------------------------------------|----------------|----------------|----------------|----------------|----------------|
|                                         | \$m            | \$m            | \$m            | \$m            | \$m            |
| Final consumption expenditure           |                |                |                |                |                |
| Private                                 | 77 384         | 98 259         | 125 420        | 147 548        | 172 117        |
| Government                              | 17 814         | 26 621         | 31 283         | 41 399         | 47 430         |
| Private gross fixed capital expenditure | 21 303         | 30 474         | 40 338         | 40 570         | 46 294         |
| Public gross fixed capital expenditure  | 10 300         | 14 205         | 16 206         | 18 057         | 19 185         |
| Increase in stocks                      | 1 406          | 1 288          | -1 146         | -1 023         | -3 659         |
| <i>Gross national expenditure</i>       | <i>129 845</i> | <i>170 821</i> | <i>211 985</i> | <i>246 547</i> | <i>281 807</i> |
| Exports of goods and services           | 13 704         | 18 751         | 28 047         | 32 921         | 36 841         |
| Imports of goods and services           | 15 456         | 23 431         | 25 482         | 34 070         | 40 865         |
| <b>Gross domestic product (GDP(E))</b>  | <b>127 297</b> | <b>164 937</b> | <b>214 453</b> | <b>245 444</b> | <b>277 904</b> |
| Statistical discrepancy                 | -135           | -263           | 1 415          | 858            | -1 669         |
| <b>Gross domestic product (GDP(I))</b>  | <b>127 162</b> | <b>164 674</b> | <b>215 868</b> | <b>246 302</b> | <b>276 235</b> |

(a) At average 1989–90 prices. Estimates prior to 1984–85 have been derived by linking estimates for earlier base years to estimates at average 1989–90 prices.

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0).

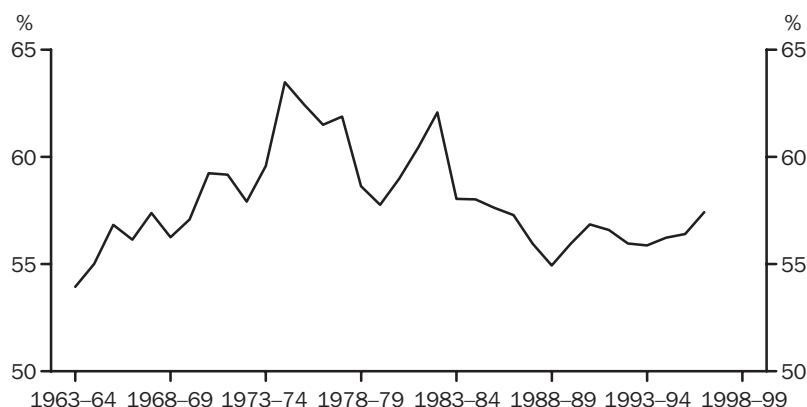
**29.6 DOMESTIC PRODUCTION ACCOUNT, At Constant Prices(a) — Annual**

|                                         | 1988–89        | 1989–90        | 1990–91        | 1991–92        | 1992–93        | 1993–94        | 1994–95        | 1995–96        | 1996–97        |
|-----------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                         | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| Final consumption expenditure           |                |                |                |                |                |                |                |                |                |
| Private                                 | 207 710        | 216 853        | 219 033        | 224 930        | 231 851        | 239 883        | 251 718        | 261 615        | 267 653        |
| Government                              | 59 600         | 61 587         | 63 158         | 64 972         | 66 025         | 67 669         | 70 085         | 72 195         | 73 168         |
| Private gross fixed capital expenditure | 70 963         | 67 820         | 60 009         | 56 651         | 61 112         | 66 767         | 73 320         | 74 517         | 82 609         |
| Public gross fixed capital expenditure  | 18 966         | 21 653         | 20 293         | 20 160         | 18 775         | 17 741         | 20 016         | 19 029         | 18 093         |
| Increase in stocks                      | 3 716          | 5 379          | -910           | -2 156         | 806            | 1 032          | 2 446          | 2 428          | -2 235         |
| <i>Gross national expenditure</i>       | <i>360 955</i> | <i>373 292</i> | <i>361 583</i> | <i>364 557</i> | <i>378 569</i> | <i>393 092</i> | <i>417 585</i> | <i>429 784</i> | <i>439 288</i> |
| Exports of goods and services           | 57 457         | 60 587         | 67 432         | 73 554         | 78 177         | 85 808         | 89 060         | 98 146         | 107 467        |
| Imports of goods and services           | 63 608         | 66 889         | 63 296         | 65 629         | 70 470         | 76 278         | 89 789         | 94 608         | 104 358        |
| <b>Gross domestic product (GDP(E))</b>  | <b>354 804</b> | <b>366 990</b> | <b>365 719</b> | <b>372 482</b> | <b>386 276</b> | <b>402 622</b> | <b>416 856</b> | <b>433 322</b> | <b>442 397</b> |
| Statistical discrepancy                 | 4 408          | 3 054          | 2 033          | -3 544         | -5 230         | -3 065         | 1 974          | 570            | 3 525          |
| <b>Gross domestic product (GDP(I))</b>  | <b>359 212</b> | <b>370 044</b> | <b>367 752</b> | <b>368 938</b> | <b>381 046</b> | <b>399 557</b> | <b>418 830</b> | <b>433 892</b> | <b>445 922</b> |

(a) At average 1989–90 prices.

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0 and 5206.0).

29.7 WAGES SHARE OF GDP(I), At Factor Cost



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

29.8 PROFITS SHARE OF GDP(I), At Factor Cost



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

## National income and outlay account

The national income and outlay account shows how much of the national income is spent on final consumption. That part of income which is not spent in this way is saving. Tables 29.9 and

29.10 show the income and outlay account for a number of years between 1962-63 and 1996-97; table 29.9 shows a series of snapshots at five-yearly intervals to 1982-83, while table 29.10 shows annual time series from 1988-89 to 1996-97.

## 29.9 NATIONAL INCOME AND OUTLAY ACCOUNT, Five-Yearly

|                                           | 1962-63       | 1967-68       | 1972-73       | 1977-78       | 1982-83        |
|-------------------------------------------|---------------|---------------|---------------|---------------|----------------|
|                                           | \$m           | \$m           | \$m           | \$m           | \$m            |
| Wages, salaries and supplements           | 8 361         | 13 212        | 23 562        | 53 066        | 94 949         |
| Net operating surplus                     | 4 709         | 6 493         | 11 276        | 18 345        | 30 220         |
| <i>Domestic factor incomes</i>            | <i>13 070</i> | <i>19 705</i> | <i>34 838</i> | <i>71 411</i> | <i>125 169</i> |
| Less net income paid overseas             | 233           | 343           | 550           | 1 210         | 3 579          |
| Indirect taxes                            | 1 738         | 2 680         | 4 572         | 10 848        | 22 686         |
| Less subsidies                            | 108           | 221           | 466           | 1 292         | 3 180          |
| <i>National income</i>                    | <i>14 467</i> | <i>21 821</i> | <i>38 394</i> | <i>79 757</i> | <i>141 096</i> |
| Less net unrequited transfers to overseas | 22            | 24            | 88            | 257           | 195            |
| <b>National disposable income</b>         | <b>14 445</b> | <b>21 797</b> | <b>38 306</b> | <b>79 500</b> | <b>140 901</b> |
| Final consumption expenditure             |               |               |               |               |                |
| Private                                   | 10 658        | 15 677        | 26 001        | 56 933        | 105 965        |
| Government                                | 1 995         | 3 711         | 6 357         | 17 272        | 32 474         |
| Saving                                    | 1 792         | 2 409         | 5 948         | 5 295         | 2 462          |
| <b>Disposal of income</b>                 | <b>14 445</b> | <b>21 797</b> | <b>38 306</b> | <b>79 500</b> | <b>140 901</b> |
| Gross national product                    | 16 608        | 25 140        | 44 243        | 94 098        | 168 897        |

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0).

## 29.10 NATIONAL INCOME AND OUTLAY ACCOUNT, Annual

|                                           | 1988-89        | 1989-90        | 1990-91        | 1991-92        | 1992-93        | 1993-94        | 1994-95        | 1995-96        | 1996-97        |
|-------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                           | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| Wages, salaries and supplements           | 163 692        | 182 181        | 190 234        | 194 245        | 201 273        | 211 648        | 225 452        | 240 724        | 256 209        |
| Net operating surplus                     | 82 919         | 87 409         | 86 120         | 89 175         | 95 603         | 101 975        | 108 706        | 116 529        | 117 881        |
| <i>Domestic factor incomes</i>            | <i>246 611</i> | <i>269 590</i> | <i>276 354</i> | <i>283 420</i> | <i>296 876</i> | <i>313 623</i> | <i>334 158</i> | <i>357 253</i> | <i>374 090</i> |
| Less net income paid overseas             | 13 596         | 17 401         | 17 621         | 15 443         | 13 420         | 13 642         | 15 895         | 16 736         | 18 451         |
| Indirect taxes                            | 45 817         | 49 056         | 50 410         | 50 299         | 52 048         | 57 343         | 62 547         | 67 003         | 70 462         |
| Less subsidies                            | 4 612          | 4 599          | 5 770          | 6 004          | 6 328          | 6 452          | 6 210          | 6 161          | 6 854          |
| <i>National income</i>                    | <i>274 220</i> | <i>296 646</i> | <i>303 373</i> | <i>312 272</i> | <i>329 176</i> | <i>350 872</i> | <i>374 600</i> | <i>401 359</i> | <i>419 247</i> |
| Less net unrequited transfers to overseas | -2 133         | -2 229         | -2 307         | -2 097         | -542           | -66            | -393           | -1 043         | -1 205         |
| <b>National disposable income</b>         | <b>276 353</b> | <b>298 875</b> | <b>305 680</b> | <b>314 369</b> | <b>329 718</b> | <b>350 938</b> | <b>374 993</b> | <b>402 402</b> | <b>420 452</b> |
| Final consumption expenditure             |                |                |                |                |                |                |                |                |                |
| Private                                   | 195 283        | 216 853        | 229 890        | 242 253        | 254 447        | 267 063        | 283 655        | 302 644        | 314 289        |
| Government                                | 56 719         | 61 587         | 66 633         | 71 449         | 74 443         | 77 181         | 79 819         | 83 941         | 86 599         |
| Saving                                    | 24 351         | 20 435         | 9 157          | 667            | 828            | 6 694          | 11 519         | 15 817         | 19 564         |
| <b>Disposal of income</b>                 | <b>276 353</b> | <b>298 875</b> | <b>305 680</b> | <b>314 369</b> | <b>329 718</b> | <b>350 938</b> | <b>374 993</b> | <b>402 402</b> | <b>420 452</b> |
| Gross national product                    | 325 592        | 352 643        | 361 667        | 372 086        | 391 955        | 416 038        | 441 399        | 470 889        | 491 321        |

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0 and 5206.0).



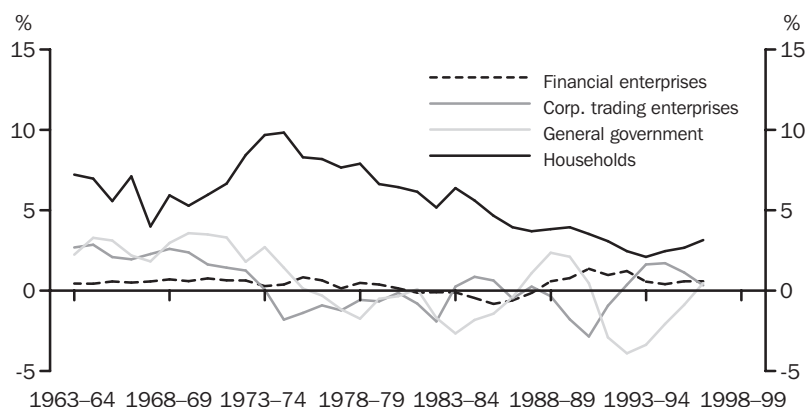
Graph 29.11 shows saving by institutional sector as a proportion of GDP(I) for the years 1963–64 to 1996–97. As shown in the graph, household saving as a percentage of GDP(I) rose moderately between 1963–64 and 1974–75, but has fallen subsequently from its high of 9.8% in 1974–75 to 3.1% in 1996–97. In 1996–97, general government saving was 0.5% of GDP(I) (\$2,417m in current value terms), following a period of negative general government saving stretching back to 1991–92. Saving of corporate trading enterprises has been negative for 13 of the past 20 years. In 1996–97 it was 0.3% of GDP(I) (\$1,669m in current value terms), with 1994–95 (at 1.7%) recording the highest percentage level since 1969–70. Saving of financial enterprises was negative from 1981–82 to 1987–88, the only period for which this sector has recorded negative saving. In 1996–97, saving of financial enterprises was 0.6% of GDP(I) (\$2,947m in current value terms).

## National capital account

The national capital account shows how the saving from the national income and outlay account is used to finance gross fixed capital expenditure. If, as is currently the case in Australia, the nation's saving is not sufficient to pay for all the capital equipment needed for Australian production, the shortfall must be borrowed from overseas. The amount borrowed from overseas is shown in the national capital account as a negative entry for net lending to overseas.

Tables 29.12 and 29.13 show the national capital account for a number of years between 1962–63 and 1996–97; table 29.12 shows a series of snapshots at five-yearly intervals to 1982–83, while table 29.13 shows annual time series from 1988–89 to 1996–97.

29.11 SAVING, By Sector — Share of GDP(I)



Source: Australian National Accounts: National Income, Expenditure and Product (5204.0).

## 29.12 NATIONAL CAPITAL ACCOUNT, Five-Yearly

|                                                    | 1962-63      | 1967-68      | 1972-73       | 1977-78       | 1982-83       |
|----------------------------------------------------|--------------|--------------|---------------|---------------|---------------|
|                                                    | \$m          | \$m          | \$m           | \$m           | \$m           |
| Consumption of fixed capital                       | 2 141        | 3 319        | 5 849         | 14 341        | 27 801        |
| Saving                                             |              |              |               |               |               |
| Household                                          | 925          | 1 020        | 3 771         | 7 294         | 8 912         |
| General government surplus on current transactions | 325          | 465          | 802           | -1 116        | -2 933        |
| Extraordinary insurance claims paid                | —            | —            | —             | —             | 200           |
| Other                                              | 542          | 924          | 1 375         | -883          | -3 717        |
| <b>Finance of gross accumulation</b>               | <b>3 933</b> | <b>5 728</b> | <b>11 797</b> | <b>19 636</b> | <b>30 263</b> |
| Gross fixed capital expenditure                    |              |              |               |               |               |
| Private                                            | 2 800        | 4 496        | 7 726         | 15 455        | 27 985        |
| Public enterprises                                 | 666          | 1 143        | 1 615         | 3 695         | 8 495         |
| General government                                 | 665          | 1 035        | 1 655         | 3 499         | 4 625         |
| Increase in stocks                                 |              |              |               |               |               |
| Private non-farm                                   | 221          | 292          | -108          | -42           | -2 218        |
| Farm and public authorities                        | 32           | -179         | -162          | -388          | -219          |
| Statistical discrepancy                            | -83          | -136         | 84            | -173          | -1 109        |
| Net lending to overseas                            | -368         | -923         | 987           | -2 410        | -7 296        |
| <b>Gross accumulation</b>                          | <b>3 933</b> | <b>5 728</b> | <b>11 797</b> | <b>19 636</b> | <b>30 263</b> |

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0 and 5206.0).

## 29.13 NATIONAL CAPITAL ACCOUNT, Annual

|                                                    | 1988-89       | 1989-90       | 1990-91       | 1991-92       | 1992-93       | 1993-94       | 1994-95       | 1995-96       | 1996-97       |
|----------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                                    | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           |
| Consumption of fixed capital                       | 51 372        | 55 997        | 58 294        | 59 814        | 62 779        | 65 166        | 66 799        | 69 530        | 72 074        |
| Saving                                             |               |               |               |               |               |               |               |               |               |
| Household                                          | 12 963        | 14 564        | 13 358        | 11 901        | 9 990         | 9 010         | 11 228        | 12 950        | 16 027        |
| General government surplus on current transactions | 7 999         | 7 809         | 1 765         | -11 274       | -15 793       | -14 465       | -9 526        | -4 330        | 2 417         |
| Extraordinary insurance claims paid                | —             | 654           | —             | —             | —             | —             | —             | —             | —             |
| Other                                              | 3 389         | -2 592        | -5 965        | 40            | 6 631         | 12 149        | 9 816         | 7 197         | 1 120         |
| <b>Finance of gross accumulation</b>               | <b>75 723</b> | <b>76 432</b> | <b>67 452</b> | <b>60 481</b> | <b>63 607</b> | <b>71 860</b> | <b>78 317</b> | <b>85 347</b> | <b>91 638</b> |
| Gross fixed capital expenditure                    |               |               |               |               |               |               |               |               |               |
| Private                                            | 67 202        | 67 821        | 60 547        | 56 758        | 62 932        | 70 082        | 77 048        | 78 622        | 84 745        |
| Public enterprises                                 | 10 384        | 13 023        | 12 008        | 11 784        | 10 184        | 9 573         | 11 412        | 10 737        | 9 070         |
| General government                                 | 7 565         | 8 629         | 8 781         | 8 809         | 9 188         | 8 611         | 9 010         | 8 772         | 9 572         |
| Increase in stocks                                 |               |               |               |               |               |               |               |               |               |
| Private non-farm                                   | 3 167         | 2 206         | -2 613        | -1 804        | 433           | 1 438         | 3 461         | 2 738         | 1 330         |
| Farm and public authorities                        | 343           | 3 173         | 1 236         | -239          | 160           | -166          | -676          | 309           | -2 687        |
| Statistical discrepancy                            | 4 122         | 3 054         | 2 091         | -3 713        | -5 557        | -3 284        | 2 153         | 628           | 4 036         |
| Net lending to overseas                            | -17 060       | -21 474       | -14 598       | -11 114       | -13 733       | -14 394       | -24 091       | -16 459       | -14 428       |
| <b>Gross accumulation</b>                          | <b>75 723</b> | <b>76 432</b> | <b>67 452</b> | <b>60 481</b> | <b>63 607</b> | <b>71 860</b> | <b>78 317</b> | <b>85 347</b> | <b>91 638</b> |

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0 and 5206.0).

Graph 29.14 shows gross fixed capital expenditure (investment) by institutional sector as a proportion of GDP(I). This proportion for corporate trading

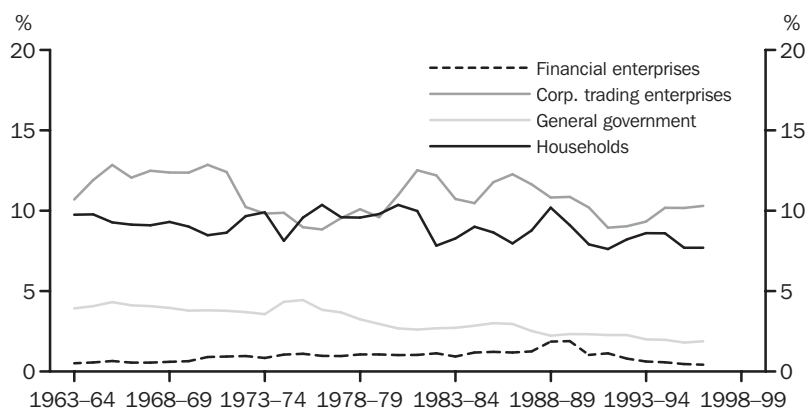
enterprises fell during the 1970s and then rose to a peak of 12.5% in 1981-82. It has subsequently fallen fairly steadily to 10.3% in

1996–97. Household investment as a proportion of GDP(I) has fallen from 10.2% in 1988–89 to 7.7% in 1996–97. While general government investment as a proportion of GDP(I) peaked at 4.4% in 1975–76, it has fallen steadily since then and in 1996–97 it was 1.9% of GDP(I).

Graph 29.15 shows net lending by institutional sector as a proportion of GDP(I). A positive percentage for a sector indicates that it is a net lender to other sectors of the economy. A negative percentage indicates that it is a net borrower from other sectors (including the rest of the world). As shown in the graph, the household sector has been a net lender to the other sectors of the economy for all years except 1967–68, 1988–89 and 1992–93 to 1995–96 when

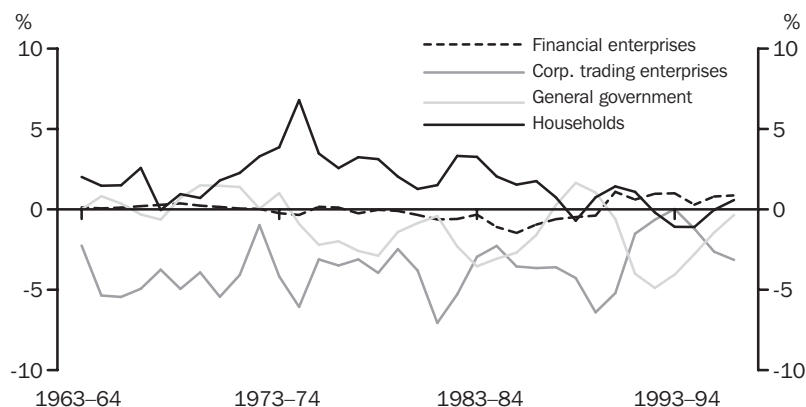
it was a net borrower. As a proportion of GDP(I), net lending by households was 0.6% in 1996–97. Except for 1993–94, corporate trading enterprises have been net borrowers over the whole period from 1963–64 to 1996–97 and the amounts borrowed have fluctuated significantly from year to year. As a proportion of GDP(I), net lending by corporate trading enterprises was –3.1% in 1996–97. After being a net lender for the period 1987–88 to 1989–90, general government has returned to being a significant net borrower over the past seven years. Expressed as a proportion of GDP(I), general government net borrowing peaked at 4.9% in 1992–93. In 1996–97 net borrowing was 0.4% of GDP(I).

**29.14 CAPITAL EXPENDITURE, By Sector — Share of GDP(I)**



Source: Australian National Accounts: National Income, Expenditure and Product (5204.0).

**29.15 NET LENDING, By Sector — Share of GDP(I)**



Source: Australian National Accounts: National Income, Expenditure and Product (5204.0).

## Overseas transactions account

The overseas transactions account is derived from the detailed balance of payments current account (see *Chapter 30, International accounts and trade*). It includes all transactions in the balance of payments current account except reinvested earnings. It shows Australia's exports and imports, incomes and unrequited transfers received by Australian residents from overseas, and incomes and unrequited transfers paid to overseas by Australian residents. The balance is net lending to overseas.

Tables 29.16 and 29.17 show the overseas transactions account for a number of years

between 1962–63 and 1996–97; table 29.16 shows a series of snapshots at five-yearly intervals to 1982–83, while table 29.17 shows annual time series from 1988–89 to 1996–97.

Australia has generally been a net borrower of capital from overseas. In the national accounts, this situation is reflected by a negative value for net lending to overseas. Australia was actually a net lender to overseas in 1963–64 and 1972–73. Net borrowing from overseas, expressed as a proportion of GDP(I), increased significantly during the early 1980s and has remained at relatively high levels since then. Graph 29.18 shows this proportion since 1963–64.

**29.16 OVERSEAS TRANSACTIONS ACCOUNT, Five-Yearly**

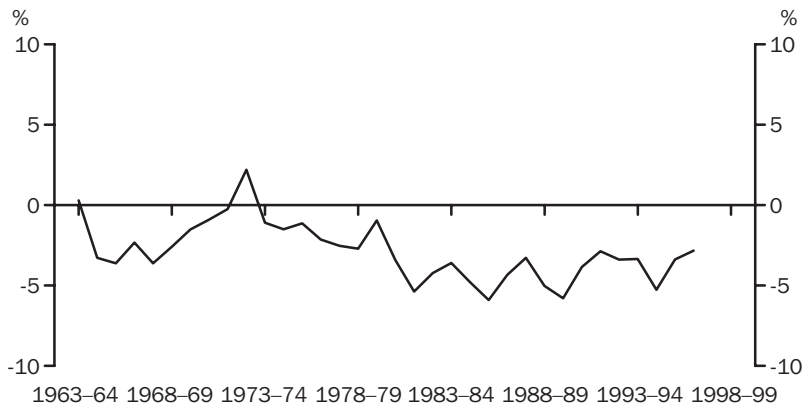
|                                              | 1962–63      | 1967–68      | 1972–73      | 1977–78       | 1982–83       |
|----------------------------------------------|--------------|--------------|--------------|---------------|---------------|
|                                              | \$m          | \$m          | \$m          | \$m           | \$m           |
| Imports of goods and services                | 2 596        | 4 115        | 5 392        | 15 179        | 29 062        |
| Interest, dividends, etc. to overseas        | 290          | 428          | 827          | 1 531         | 4 619         |
| Labour income to overseas                    | 5            | 9            | 25           | 57            | 135           |
| Unrequited transfers to overseas             | 128          | 240          | 471          | 863           | 1 515         |
| Net lending to overseas                      | –368         | –923         | 987          | –2 410        | –7 296        |
| <b>Use of current receipts</b>               | <b>2 651</b> | <b>3 869</b> | <b>7 702</b> | <b>15 220</b> | <b>28 035</b> |
| Exports of goods and services                | 2 483        | 3 559        | 7 017        | 14 236        | 25 540        |
| Interest, dividends, etc. from overseas      | 58           | 85           | 278          | 301           | 937           |
| Labour income from overseas                  | 4            | 9            | 24           | 77            | 158           |
| Extraordinary insurance claims from overseas | —            | —            | —            | —             | 80            |
| Unrequited transfers from overseas           | 106          | 216          | 383          | 606           | 1 320         |
| <b>Current receipts from overseas</b>        | <b>2 651</b> | <b>3 869</b> | <b>7 702</b> | <b>15 220</b> | <b>28 035</b> |

Source: Australian National Accounts: National Income, Expenditure and Product (5204.0 and 5206.0).

**29.17 OVERSEAS TRANSACTIONS ACCOUNT, Annual**

|                                              | 1988-89       | 1989-90       | 1990-91       | 1991-92       | 1992-93       | 1993-94       | 1994-95       | 1995-96        | 1996-97        |
|----------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
|                                              | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           | \$m            | \$m            |
| Imports of goods and services                | 60 690        | 66 889        | 65 118        | 67 224        | 77 041        | 83 384        | 95 421        | 98 828         | 101 548        |
| Interest, dividends, etc. to overseas        | 15 496        | 20 329        | 20 995        | 18 960        | 17 153        | 17 190        | 19 169        | 21 551         | 22 313         |
| Labour income to overseas                    | 279           | 406           | 429           | 326           | 311           | 283           | 389           | 458            | 542            |
| Unrequited transfers to overseas             | 2 027         | 2 218         | 2 304         | 2 373         | 2 438         | 2 608         | 2 704         | 2 749          | 2 671          |
| Net lending to overseas                      | -17 060       | -21 474       | -14 598       | -11 112       | -13 733       | -14 394       | -24 092       | -16 459        | -14 427        |
| <b>Use of current receipts</b>               | <b>61 432</b> | <b>68 368</b> | <b>74 248</b> | <b>77 771</b> | <b>83 210</b> | <b>89 071</b> | <b>93 591</b> | <b>107 127</b> | <b>112 647</b> |
| Exports of goods and services                | 55 093        | 60 587        | 65 833        | 69 458        | 76 186        | 82 566        | 86 832        | 98 062         | 104 366        |
| Interest, dividends, etc. from overseas      | 1 954         | 2 814         | 3 222         | 3 388         | 3 547         | 3 320         | 3 111         | 4 663          | 3 726          |
| Labour income from overseas                  | 225           | 370           | 432           | 455           | 497           | 511           | 551           | 610            | 679            |
| Extraordinary insurance claims from overseas | —             | 150           | 150           | —             | —             | —             | —             | —              | —              |
| Unrequited transfers from overseas           | 4 160         | 4 447         | 4 611         | 4 470         | 2 980         | 2 674         | 3 097         | 3 792          | 3 876          |
| <b>Current receipts from overseas</b>        | <b>61 432</b> | <b>68 368</b> | <b>74 248</b> | <b>77 771</b> | <b>83 210</b> | <b>89 071</b> | <b>93 591</b> | <b>107 127</b> | <b>112 647</b> |

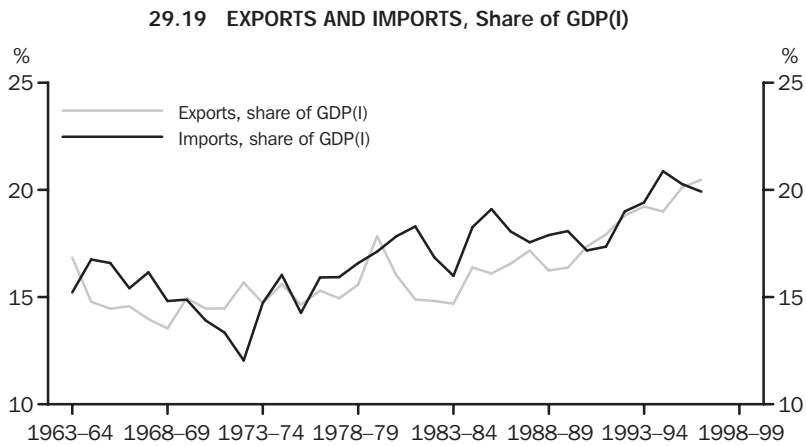
Source: Australian National Accounts: National Income, Expenditure and Product (5204.0 and 5206.0).

**29.18 NET LENDING TO OVERSEAS, Share of GDP(I)**

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

The importance of foreign trade to the Australian economy is illustrated by graph 29.19, which shows the ratios of exports and imports of goods and services to GDP(I) for the financial

years 1963-64 to 1996-97. In 1996-97 the import ratio was 19.9% and the export ratio was 20.5%.



Source: Australian National Accounts: National Income, Expenditure and Product (5204.0).

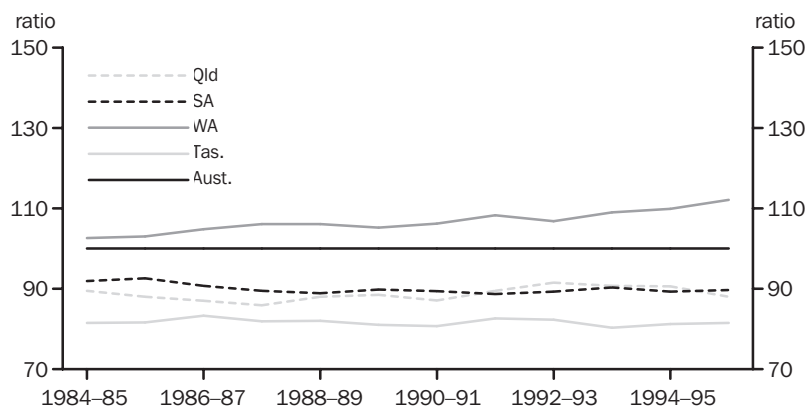
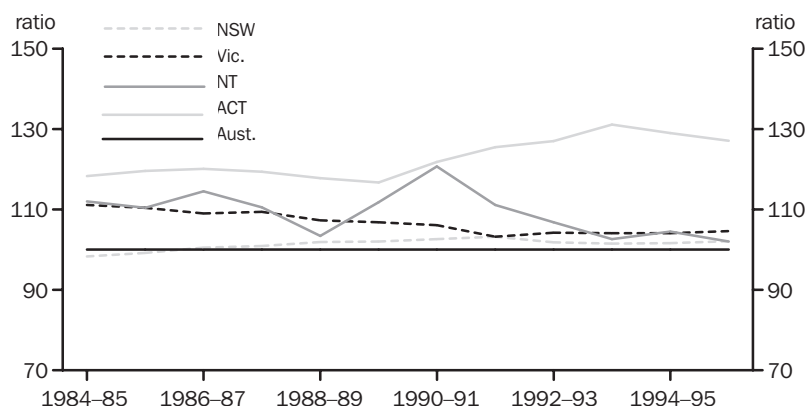
**State accounts**

As well as Australia’s national accounts, the ABS produces State accounts for each of Australia’s States and Territories each year. These provide estimates of gross State product (GSP) and State final demand. GSP is produced by summing the incomes generated in the production process (the income approach to measuring total production). State final demand is equal to the sum of private and government final consumption expenditure and gross fixed capital expenditure. Estimates of State final demand and GSP are available in both current and constant prices. The constant price GSP estimates are experimental.

An important use of State accounts is to compare the performance of each State and Territory. Graph 29.20 show gross State product, in current prices, per head of mean population for each State and Territory divided by the Australian value (GDP(I) per head of mean population) since 1984–85.

GSP per head of mean population in 1995–96 was above the national average for New South Wales, Victoria, Western Australia, the Northern Territory and the Australian Capital Territory. GSP per head of mean population has been below the national average for the whole length of the time series (i.e. since 1984–85) for each of Queensland, South Australia and Tasmania.

29.20 GROSS STATE PRODUCT PER CAPITA (Aust. = 100.0)



Source: Australian National Accounts: State Accounts (5220.0).

## Input-output tables

### Basic structure

Input-output tables show the structure of a country's entire production system for a particular period, usually one year. They show which goods and services are produced by each industry and how they are used (e.g. some goods, such as cars, are sold to final consumers while others, such as steel, are used as inputs by other industries in producing more goods and services). The tables are based on the principle that the value of the output of each industry can be expressed as the sum of the values of all the inputs to that industry plus any profits made. All the goods and services produced in a period are identified as being used as inputs by industries in their production process, being sold to final users of the goods and services (either in

Australia, or overseas as exports), or contributing to the change in stocks (an increase in stocks if more goods are produced than purchased or a run-down in stocks if purchases exceed production). For the production system as a whole, the sum of all outputs must equal the sum of all inputs and, for the economy as a whole, total supply must equal total demand (stocks provide the mechanism which balances supply and demand).

### Relationship to the national income and expenditure accounts

Input-output tables can be directly related to the domestic production account. The income side of the domestic production account shows the amount of income generated in the economy accruing to labour (in the form of wages, salaries

and supplements) and to capital (as profits or, in national accounting terms, gross operating surplus). The expenditure side of the account shows the value of goods and services entering into the various categories of final demand.

The input-output tables provide a much more detailed disaggregation of the domestic production account than is available in the national income, expenditure and product accounts. The latter only supply details of the end results of economic activity, whereas the input-output tables provide a means of tracing flows of goods and services step by step through the production process. The extra detail provided by the input-output tables is essential for many analyses.

### Input-output table for seven industry sectors

Table 29.21 and diagram 29.22 show the flows of goods and services in respect of 1993–94.

The links between the table and the diagram are explained by working through the following formulas.

Intermediate usage (\$349,855m) in the diagram is derived by summing from column 8 of the table: Intermediate usage (\$302,794m); Sales by final buyers (\$1,335m); Competing imports c.i.f. (\$43,251m); and Complementary imports c.i.f. (\$2,475m).

Gross value added (\$429,539m) in the diagram is derived by summing from column 14 of the table: Wages, salaries and supplements (\$194,981m);

Gross operating surplus (\$183,311m); and taxes: Commodity taxes (net) (\$28,517m), Indirect taxes n.e.c. (net) (\$19,983m) and Duty on competing imports (\$2,747m).

Domestic production (\$779,394m) in the diagram is derived by summing: Intermediate usage from column 8 of the table (\$302,794m); total final demand at basic values from column 13 (\$453,893m); and the indirect taxes payable on those final demand items (see column 13): Commodity taxes (net) (\$18,298m), Indirect taxes n.e.c. (net) (\$2,688m) and Duty on competing imports (\$1,721m).

Imports (\$84,578m) in the diagram is derived by summing from column 14 of the table: Competing imports c.i.f. (\$84,956m) and Complementary imports c.i.f. (–\$378m).

Total supply (\$863,972m), which must equal total demand, is the sum of Domestic production (\$779,394m) and Imports (\$84,578m).

Domestic final demand (\$430,888m) in the diagram is derived from the table by subtracting total Exports (\$83,229m), column 12, from total Final demand (\$514,117m), column 13.

Exports (\$83,229m) in the diagram is total exports, column 12, in the table.

Total demand (\$863,972m), which must equal total supply, is the sum of Domestic final demand (\$430,888m), Intermediate usage (\$349,855m), and Exports (\$83,229m).



## 29.21 INDUSTRY BY INDUSTRY FLOW MATRIX, Basic Values — 1993–94

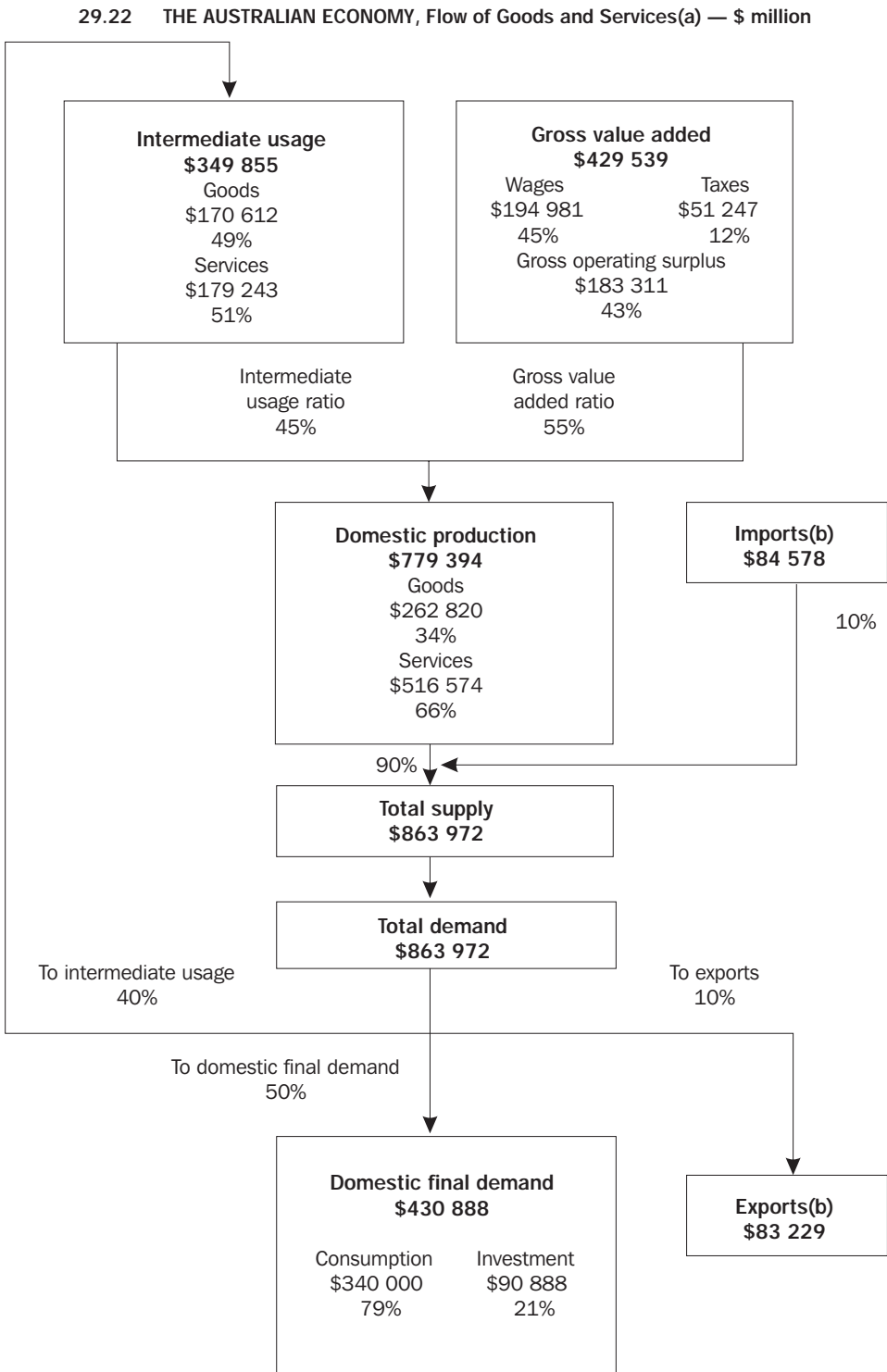
|                                 | Agriculture <sup>1</sup> | Mining <sup>2</sup> | Manufacturing <sup>3</sup> | Construction <sup>4</sup> | Trade and transport <sup>5</sup> | Service industries <sup>6</sup> | Use<br>Public admin. and defence <sup>7</sup> |
|---------------------------------|--------------------------|---------------------|----------------------------|---------------------------|----------------------------------|---------------------------------|-----------------------------------------------|
| Supply                          | \$m                      | \$m                 | \$m                        | \$m                       | \$m                              | \$m                             | \$m                                           |
| Agriculture                     | 2 550                    | 25                  | 13 615                     | 57                        | 32                               | 1 118                           | 74                                            |
| Mining                          | 46                       | 3 662               | 9 163                      | 384                       | 106                              | 1 821                           | 120                                           |
| Manufacturing                   | 3 619                    | 2 168               | 45 830                     | 13 419                    | 11 496                           | 16 297                          | 4 369                                         |
| Construction                    | 214                      | 239                 | 45                         | 44                        | 245                              | 1 619                           | 818                                           |
| Trade and transportation        | 2 126                    | 1 195               | 14 400                     | 3 257                     | 6 561                            | 9 277                           | 1 990                                         |
| Service Industries              | 2 948                    | 4 128               | 14 746                     | 6 788                     | 27 760                           | 57 974                          | 9 320                                         |
| Public admin. and defence       | 67                       | 27                  | 665                        | 178                       | 494                              | 1 062                           | 4 640                                         |
| Intermediate usage              | 11 569                   | 11 444              | 98 463                     | 24 126                    | 46 695                           | 89 168                          | 21 330                                        |
| Wages, salaries, supplements    | 3 261                    | 4 834               | 29 810                     | 12 056                    | 32 398                           | 97 740                          | 14 883                                        |
| Gross operating surplus         | 9 510                    | 14 221              | 26 024                     | 12 072                    | 28 581                           | 91 381                          | 1 522                                         |
| Commodity taxes (net)           | 744                      | 269                 | 2 017                      | 407                       | 3 289                            | 3 503                           | -11                                           |
| Indirect taxes n.e.c. (net)     | 643                      | 370                 | 2 274                      | 563                       | 3 400                            | 10 049                          | -4                                            |
| Sales by final buyers           | —                        | 5                   | 1 289                      | 1                         | —                                | 39                              | —                                             |
| Competing imports c.i.f.(a)     | 1 280                    | 1 589               | 21 622                     | 2 613                     | 4 529                            | 9 495                           | 2 124                                         |
| Duty on competing imports       | 25                       | 38                  | 595                        | 114                       | 70                               | 184                             | —                                             |
| Complementary imports c.i.f.(a) | 76                       | 93                  | 737                        | 148                       | 338                              | 856                             | 228                                           |
| Duty on complementary imports   | —                        | —                   | —                          | —                         | —                                | —                               | —                                             |
| <b>Australian production</b>    | <b>27 107</b>            | <b>32 864</b>       | <b>182 830</b>             | <b>52 100</b>             | <b>119 300</b>                   | <b>302 415</b>                  | <b>40 071</b>                                 |

|                                 | Intermediate usage <sup>8</sup> = Sum <sup>1-7</sup> | Final consumption expenditure <sup>9</sup> | Gross fixed capital expenditure <sup>10</sup> | Increase in stocks <sup>11</sup> | Exports <sup>12</sup> | Final demand <sup>13</sup> = Sum <sup>8-12</sup> | Total supply <sup>14</sup> = Sum <sup>3+13</sup> |
|---------------------------------|------------------------------------------------------|--------------------------------------------|-----------------------------------------------|----------------------------------|-----------------------|--------------------------------------------------|--------------------------------------------------|
| Supply                          | \$m                                                  | \$m                                        | \$m                                           | \$m                              | \$m                   | \$m                                              | \$m                                              |
| Agriculture                     | 17 471                                               | 3 879                                      | 32                                            | 192                              | 5 534                 | 9 636                                            | 27 107                                           |
| Mining                          | 15 301                                               | 623                                        | 226                                           | -1 380                           | 18 094                | 17 562                                           | 32 864                                           |
| Manufacturing                   | 97 199                                               | 40 837                                     | 15 499                                        | -210                             | 29 506                | 85 632                                           | 182 830                                          |
| Construction                    | 3 224                                                | 1 697                                      | 47 132                                        | 2                                | 46                    | 48 876                                           | 52 100                                           |
| Trade and transportation        | 38 804                                               | 57 017                                     | 8 240                                         | 383                              | 14 856                | 80 496                                           | 119 300                                          |
| Service Industries              | 123 663                                              | 171 362                                    | 3 091                                         | —                                | 4 299                 | 178 751                                          | 302 415                                          |
| Public admin. and defence       | 7 132                                                | 32 585                                     | 181                                           | —                                | 174                   | 32 940                                           | 40 071                                           |
| Intermediate usage              | 302 794                                              | 308 000                                    | 74 399                                        | -1 014                           | 72 507                | 453 893                                          | 756 687                                          |
| Wages, salaries, supplements    | 194 981                                              | —                                          | —                                             | —                                | —                     | —                                                | 194 981                                          |
| Gross operating surplus         | 183 311                                              | —                                          | —                                             | —                                | —                     | —                                                | 183 311                                          |
| Commodity taxes (net)           | 10 219                                               | 14 716                                     | 2 838                                         | 95                               | 650                   | 18 298                                           | 28 517                                           |
| Indirect taxes n.e.c. (net)     | 17 295                                               | —                                          | 2 688                                         | —                                | —                     | 2 688                                            | 19 983                                           |
| Sales by final buyers           | 1 335                                                | 3 550                                      | -4 730                                        | -281                             | 126                   | -1 335                                           | —                                                |
| Competing imports c.i.f.(a)     | 43 251                                               | 15 677                                     | 14 837                                        | 1 245                            | 9 946                 | 41 705                                           | 84 956                                           |
| Duty on competing imports       | 1 026                                                | 928                                        | 837                                           | -45                              | —                     | 1 721                                            | 2 747                                            |
| Complementary imports c.i.f.(a) | 2 475                                                | -2 871                                     | 34                                            | -16                              | —                     | -2 853                                           | -378                                             |
| Duty on complementary imports   | —                                                    | —                                          | —                                             | —                                | —                     | —                                                | —                                                |
| <b>Australian production</b>    | <b>756 687</b>                                       | <b>340 000</b>                             | <b>90 903</b>                                 | <b>-15</b>                       | <b>83 229</b>         | <b>514 117</b>                                   | <b>1 270 804</b>                                 |

(a) Including charges for insurance and freight.

Source: Derived from Australian National Accounts: Input-Output Tables (5209.0).



(a) Flows are based on 1993–94 input-output tables. (b) Includes re-exports.  
Source: Derived from Australian National Accounts: Input-Output Tables (5209.0).

## Financial accounts

In addition to the national accounts, the ABS produces quarterly information on the level of financial assets and liabilities of each institutional sector of the economy, the market for financial instruments and inter-sectoral transactions in financial assets and liabilities classified by financial instrument (see *Chapter 26, Financial system*).

## National balance sheet

The national balance sheet provides estimates of the value of Australia's produced, non-produced and financial assets, our liabilities to the rest of the world and the country's net worth (defined as the difference between total assets and liabilities, including shares) for the total economy. The latest edition of the balance sheet provides, for the first time, a balance sheet for each of the four domestic sectors: households (and unincorporated enterprises), general government, financial corporations and non-financial corporations.

The non-produced assets included in the balance sheet cover experimental estimates of the value of some of Australia's natural resources: sub-soil assets, timber available for log production and land. The monetary estimates of natural resources contained in the balance sheet are underpinned by a dataset of physical estimates detailing levels of particular natural resources. Due to their experimental nature, the monetary estimates of the natural resources should be considered in conjunction with the physical estimates provided. Valuation of natural resources is a difficult and contentious undertaking. The ABS continues to work with agencies, in Australia and abroad, to explore the best approaches to the measurement of the physical resources as well as the valuation of these resources, but it will be some time before there is an agreed approach. For this reason the estimates of natural resources presented in the balance sheet are considered to be experimental.

The estimates provide input for monitoring the availability and exploitation of these resources and for assisting in the formulation of environmental policies. Data on the level, composition and change of assets and liabilities also indicate the extent of, and change to, economic resources and claims on a nation and on each of its institutional sectors.

Sectoral balance sheets provide information necessary for analysing a number of topics. Examples include: determining household spending behaviour and liquidity; and the computation of widely used ratios, such as assets to liabilities, net worth to total liabilities, non-financial to financial assets, debt to income etc. In a period of concern about the level of saving in Australia, national and sector balance sheets provide additional information on the relationship between consumption and saving behaviour and wealth accumulation.

The ABS will continue to develop estimates of the value of Australia's assets for inclusion in national balance sheets as the recommendations of the 1993 edition of *System of National Accounts* (SNA93) are implemented and as additional data become available. Estimation techniques will be honed as research in Australia and abroad explores in greater depth issues relating to the valuation of natural resources. Similarly, improvements in the valuation of produced and financial assets and liabilities will be included in the balance sheets as they become available. In addition, under SNA93 the definition of an asset has been extended. Accordingly, estimates of the value of various non-financial tangible produced assets (such as certain defence expenditure) and produced intangible fixed assets (including mineral exploration and computer software) will be developed and included in the flow accounts of the system, as well as the balance sheet, when SNA93 is introduced.

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# Impact of the 1995–96 farm season on Australian production

## Introduction

From time to time the changing fortunes of the farm sector have a significant impact on the growth of GDP. While the farm sector's direct contribution to GDP is only about 3%, the indirect effects on other industries also need to be taken into account. For instance, on those occasions when a farm season is better than its predecessor there is an impact on the downstream industries, such as wholesale trade and freight transport. The increased output of agriculture and the downstream industries requires increased inputs, which require the supplying industries to increase their output, which requires their supplying industries to increase their output, and so on. This extra output also leads to extra income, some of which will be spent and will generate further output, which will lead to a further increase in income, and so on. In this way, the so-called multiplier effect magnifies the effect of good and bad farm seasons. If there is a poor season then the multiplier effect is negative. Thus, there are three effects: the primary effect on farm production, the secondary effect on downstream industries and the tertiary effect of the multiplier.

The following analysis shows that the change in fortune of the farm sector had a substantial impact on the quarterly growth rates of the seasonally adjusted constant price estimates of GDP in 1995–96. The primary effect of the 1995–96 farm season added 0.7 percentage points to growth in the September quarter 1995 and a further 0.3 percentage points in the March quarter 1996. The secondary effect on downstream industries was modest, and mainly affected the December quarter 1995 and the March and June quarters 1996.

Farm incomes grew substantially in 1995–96, with growers of wheat and barley being the major beneficiaries. If farmers spent a substantial amount of the extra income they received in 1995–96 shortly after they received it, then they would have boosted GDP growth considerably, particularly in the March quarter.

Unless otherwise stated, the data appearing in this article are either taken from the September quarter 1996 issue of *Australian National Accounts: National, Income, Expenditure and Product* (5206.0) or underlie those data.

## Total impact of the good farm season in 1995–96

To get some idea of the impact of good and bad farm seasons we need only compare 1995–96 with 1994–95. The good season in 1995–96 added \$2,773m to constant price gross farm product, about \$60m to wholesale trade and about \$80m to transport. Thus, the primary effect was \$2,773m and the secondary effect was about \$140m<sup>1</sup>. The ABS does not have a firm figure for the tertiary effect, but it is possible to get some idea of its size by using 'total multipliers' derived from the national accounts input-output tables<sup>2</sup>.

The total (value added) multipliers used indicate the increase in Australia's GDP arising from an increase in output of \$1.00 in a particular industry. The total multiplier captures the total effect of the increase in the intermediate inputs an industry requires to produce the additional \$1.00 of output and the total effect arising from the increase in income generated by all the increased production. It assumes that no change in the capital stock is required.

The multipliers are determined by the relationships between the total outputs and total inputs of an industry. Such a relationship need not provide a good indicator of the relationship between outputs and inputs at the margin, and so multipliers have to be used judiciously. While the constant price estimates of farm output increased by 14.1% (\$3,131m) between 1994–95 and 1995–96, farm inputs only increased by 3.5% (\$358m); most of the increase in farm output was simply due to better weather. Therefore, the multiplier effect arising from the increase in farm inputs was relatively small, and so the total multiplier for agriculture cannot be used in these circumstances. A way around the problem is to consider the effects from the increases in farm intermediate inputs and farm incomes separately.

The tertiary effect arising from the increase in farm intermediate inputs can be estimated by multiplying the increase by a total multiplier representative of the industries that produced the farm intermediate inputs. A weighted average of the total multipliers for the principal supplying industries is about 1.2<sup>3</sup>. (It is relatively low because a significant proportion of the petroleum used in Australia is imported.) With a multiplier of this size, the increase in farm intermediate inputs would have led to an increase in GDP of about \$430m.

Once an estimate has been made of the amount of extra final expenditures farmers made on household consumption and capital goods, the same approach can be used to estimate the tertiary effect from this source. Given the high level of indebtedness of farmers, there would be a considerable incentive, if not imperative, to use much of the extra income to reduce debt. On the other hand, there would be a need to replace run-down capital stock and a desire to make much wanted household purchases. There is some evidence for an increase in capital expenditure by farmers. For example, the number of tractor sales recorded by the Tractor and Machinery Association of Australia shows an increase of 14.8% between the year starting December quarter 1994 and the year starting December quarter 1995.

Table S5.1 presents estimates of the tertiary effect arising from greater expenditure on private consumption and capital formation by farmers due to increased farm production in 1995–96 given a number of different assumptions. In the first column it is assumed that farmers spent 20% of the extra income earned in 1995–96. It is assumed the remainder was used to retire debt, pay taxes or put into savings. In the second and third columns it is assumed that they spent 40% and 60%, respectively. It is further assumed that the total multiplier for these expenditures was 1.35<sup>4</sup>.

The increase in farm income has to be expressed in a form suitable for deriving the tertiary effect at average 1989–90 prices. This has been achieved by deflating the current price estimates of gross farm product in 1994–95 and 1995–96 with the GDP IPD and then subtracting the measure of real income for 1994–95 from the measure of real income for 1995–96. The increase in real income is \$2,792m.

**S5.1 TERTIARY EFFECT DUE TO INCREASED FARM INCOME IN 1995–96**

|                              | Extra income spent by farmers |       |       |
|------------------------------|-------------------------------|-------|-------|
|                              | 20%                           | 40%   | 60%   |
|                              | \$m                           | \$m   | \$m   |
| Extra expenditure by farmers | 558                           | 1 117 | 1 675 |
| Tertiary effect              | 754                           | 1 508 | 2 262 |

(a) At average 1989–90 prices.

Source: ABS, unpublished data, Constant Prices Estimates Section.

An important feature of the 1995–96 farm season was that prices were considerably higher than they had been in the previous five years. The values of the IPD of gross farm product for the six years from 1990–91 (1989–90 = 100.0) are 75.9, 75.1, 77.7, 80.1, 92.4 and 98.5. The growth of the gross farm product IPD was much stronger than the growth of the GDP IPD over the two years 1994–95 and 1995–96, and so the strong recovery in prices gave an additional boost to real farm incomes. This almost certainly led to a larger tertiary effect than would otherwise have been the case.

In addition to the tertiary effects arising from increased expenditures by farmers on intermediate inputs, private consumption and capital expenditure, there is the tertiary effect arising from the increased production of the wholesale trade and transport industries. Total multipliers, which are used to calculate the other tertiary effects, are inappropriate in this case, because the initial multiplier effect is in terms of an increase in value added rather than output. The appropriate multipliers are derived as the ratio of the total multiplier to the initial effect multiplier. These are known as type 2A multipliers. Using type 2A multipliers of 2.225 and 2.281, respectively, the combined secondary and tertiary effects are estimated to be \$134m for wholesale trade and \$182m for transport. Therefore, the tertiary effects are \$74m (\$134m minus \$60m) and \$102m (\$182m minus \$80m), respectively.

If the secondary and tertiary effects associated with the increase in production of wholesale trade and transport are added to the tertiary effect arising from the increase in farm intermediate inputs and the primary effect of the increase in farm production, we obtain a figure of \$3,519m (i.e. 134 + 182 + 430 + 2,773). If \$754m and \$2,262m (see table S5.1) are taken as the lower and upper bounds of the tertiary effect arising from the increase in farmers' final

expenditures, then the total effect (primary, secondary and tertiary combined) arising from the improvement in farm production between 1994–95 and 1995–96 is somewhere in the range of \$4,300m to \$5,800m at average 1989–90 prices. This represents between 1.0% and 1.3% of GDP in 1995–96. However, not all of the effect took place in 1995–96; some part of the increase will impact on GDP in later periods.

### Impact of the good farm season in 1995–96 on the quarter-to-quarter growth rates of GDP in 1995–96

In this section an attempt is made to quantify the impact of the good farm season in 1995–96 on the quarterly movements of seasonally adjusted GDP in 1995–96.

The good farm season in 1995–96 had a far from uniform impact on quarterly growth rates through the year. Crops, principally wheat and barley, accounted for nearly all of the increase in farm output in 1995–96. Crop output is recorded in the national accounts only when it is harvested, which is almost exclusively in the December and March quarters. This makes it very difficult to seasonally adjust in a completely satisfactory manner<sup>5</sup>.

The method used to seasonally adjust farm output of wheat, sugar cane and other crops is to divide the annual production of these crops by four and allocate this amount to each of the four quarters in a financial year. Although this avoids problems that would be associated with the application of standard methods of seasonal adjustment to the production of crops, it introduces a step in the seasonally adjusted estimates between the June and September quarters, because it concentrates the whole of the annual change for these crops into the September quarter, followed by zero growth in the December, March and June quarters. (Furthermore, there is no particular reason why labour input should change much in the September quarter, and so any big change in seasonally adjusted output in that quarter is likely to be reflected in gross product per unit of labour input.)

In seasonally adjusted constant price terms, gross farm product increased by \$700m in the September quarter 1995. This was followed by a small fall in the December quarter and an

increase of \$315m in the March quarter, due to growth in wool production and livestock slaughtering.

Most of the initial impact of a good or bad season on downstream industries and the intermediate inputs used in farm production occurs in the December and March quarters — at the time, or shortly after, the crops are harvested. It is estimated that the seasonally adjusted constant price estimates of gross product for wholesale trade and transport were boosted, in aggregate, by \$65m in the December quarter 1995 and by a further \$43m in the March quarter 1996. These rises were followed by a fall of about \$26m in the June quarter. The bulk of the \$358m increase in farm intermediate inputs occurred in the December quarter.

Over \$1,700m (nominal dollars) was paid to wheat growers in the December quarter 1995 and over \$700m in the March quarter 1996 — roughly double the amount paid in the previous year. The bulk of the former occurred in the month of December.

There are four unknowns that stand in the way of quantifying the total effect of the 1995–96 season on the quarterly estimates of GDP:

- the timing of payments to the growers of crops other than wheat;
- how much of the extra income earned by farmers was spent;
- how quickly farmers spent that part of the extra income; and
- how quickly the multiplier effects work.

Multiplier effects take the form of a geometric progression, and so the bulk of the effects occur in the first few rounds. In reality, each round probably spans a substantial amount of time and has something akin to a chi-squared distribution (roughly bell shaped with a short tail before the peak and a longer tail afterwards). Given that the nation's stock of goods is turned over at each stage in the manufacturing–wholesale–retail process about every seven weeks<sup>6</sup> on average, then the bulk of each round of a multiplier is probably quite short, maybe one or two months. If it is further assumed that multiplier effects follow a simple geometric progression, then the total multiplier effects (including the initial effects) arising from the boost to farm intermediate inputs, wholesale trade and transport on the seasonally adjusted constant price estimates of GDP can be estimated. If each round of the multipliers took one month then



these effects would have boosted the December, March and June quarters of 1995–96 by about \$359m, \$369m and \$228m, respectively. If each round of the multipliers took two months then the December, March and June quarters of 1995–96 would have been boosted by about \$223m, \$390m and \$212m, respectively<sup>7</sup>.

If all crop growers were paid promptly then the timing of payments would be similar to that of wheat. It seems likely that farmers have spent and will continue to spend some of the extra income over many quarters; but it is also likely that there was a surge in spending shortly after they received their payments. For example, suppose the distribution of their additional expenditure in 1995–96 was 10% in the December quarter, 40% in the March quarter, 20% in the June quarter, and the remaining 30% in subsequent quarters. Then for the three assumptions of the proportion of extra income spent on private consumption and capital expenditure (i.e. 20%, 40% and 60%) the total multiplier effects would be as shown in table S5.2 for a one-month multiplier round and table S5.3 for a two-month multiplier round.

Table S5.2 shows the quarterly tertiary effects arising from greater expenditure on private consumption and capital formation by farmers due to increased farm income in 1995–96, at average 1989–90 prices, assuming a one-month multiplier round.

#### S5.2 TERTIARY EFFECT FROM HIGHER FARM INCOME, One-Month Multiplier Round(a)

|                     | Extra income spent by farmers |              |              |
|---------------------|-------------------------------|--------------|--------------|
|                     | 20%                           | 40%          | 60%          |
|                     | \$m                           | \$m          | \$m          |
| December quarter    | 40                            | 80           | 120          |
| March quarter       | 229                           | 458          | 687          |
| June quarter        | 175                           | 350          | 525          |
| Subsequent quarters | 310                           | 620          | 930          |
| <b>Total</b>        | <b>754</b>                    | <b>1 508</b> | <b>2 262</b> |

(a) At average 1989–90 prices.

Source: ABS, unpublished data, Constant Prices Estimates Section.

Table S5.3 shows the quarterly tertiary effects arising from greater expenditure on private consumption and capital formation by farmers due to increased farm income in 1995–96, at

average 1989–90 prices, assuming a two-month multiplier round.

#### S5.3 TERTIARY EFFECT FROM HIGHER FARM INCOME, Two-Month Multiplier Round(a)

|                     | Extra income spent by farmers |              |              |
|---------------------|-------------------------------|--------------|--------------|
|                     | 20%                           | 40%          | 60%          |
|                     | \$m                           | \$m          | \$m          |
| December quarter    | 24                            | 48           | 72           |
| March quarter       | 187                           | 374          | 561          |
| June quarter        | 134                           | 268          | 402          |
| Subsequent quarters | 409                           | 818          | 1 227        |
| <b>Total</b>        | <b>754</b>                    | <b>1 508</b> | <b>2 262</b> |

(a) At average 1989–90 prices.

Source: ABS, unpublished data, Constant Prices Estimates Section.

Table S5.4 presents the combined secondary and tertiary effects of the 1995–96 farm season by adding the combined secondary and tertiary effects arising from additional farm intermediate inputs and wholesale trade and transport gross product to the figures in table S5.3. It is assumed that each multiplier round takes two months.

#### S5.4 COMBINED SECONDARY & TERTIARY EFFECTS, Two-Month Multiplier Round(a)

|                     | Extra income spent by farmers |              |              |
|---------------------|-------------------------------|--------------|--------------|
|                     | 20%                           | 40%          | 60%          |
|                     | \$m                           | \$m          | \$m          |
| December quarter    | 247                           | 271          | 295          |
| March quarter       | 577                           | 764          | 951          |
| June quarter        | 346                           | 480          | 614          |
| Subsequent quarters | 596                           | 1 002        | 1 411        |
| <b>Total</b>        | <b>1 763</b>                  | <b>2 517</b> | <b>3 271</b> |

(a) At average 1989–90 prices.

Source: ABS, unpublished data, Constant Prices Estimates Section.

Tables S5.5, S5.6 and S5.7 demonstrate the impact of the good 1995–96 season on the quarterly movements of the seasonally adjusted and trend constant price estimates of production in 1995–96. For illustrative purposes, the impact of farmers' final expenditures is taken to be the case where 40% of the extra income earned by farmers is spent with the 10:40:20:30 quarterly distribution described above. It is also assumed that each multiplier round takes two months and the tertiary effects presented above can be regarded as being seasonally adjusted.



**S5.5 CONTRIBUTIONS TO THE GROWTH OF GDP(A), Seasonally adjusted(a)**

|                                                                             | 1995–96 |      |      |      | Jun qtr      |
|-----------------------------------------------------------------------------|---------|------|------|------|--------------|
|                                                                             | Sep     | Dec  | Mar  | Jun  | 1995 to 1996 |
|                                                                             | %pts    | %pts | %pts | %pts | %pts         |
| Gross farm product, as published                                            | 0.7     | 0.0  | 0.3  | –0.1 | 0.8          |
| Effect of 1995–96 farm season on farm inputs, wholesale trade and transport | 0.0     | 0.2  | 0.2  | –0.2 | 0.2          |
| Effect of 1995–96 farm season on farmers' final expenditures                | 0.0     | 0.0  | 0.3  | –0.1 | 0.3          |
| Total effect of 1995–96 farm season                                         | 0.7     | 0.2  | 0.8  | –0.4 | 1.3          |
| GDP(A), as published                                                        | 1.7     | 0.8  | 2.1  | 0.1  | 4.7          |

(a) At average 1989–90 prices.

Source: ABS, unpublished data, Constant Prices Estimates Section.

**S5.6 IMPACT OF THE GOOD FARM SEASON IN 1995–96 ON PERCENTAGE CHANGES, Seasonally adjusted(a)**

|                                                      | 1995–96 |     |     |     | Jun qtr      |
|------------------------------------------------------|---------|-----|-----|-----|--------------|
|                                                      | Sep     | Dec | Mar | Jun | 1995 to 1996 |
|                                                      | %       | %   | %   | %   | %            |
| GDP(A), as published                                 | 1.7     | 0.8 | 2.1 | 0.1 | 4.7          |
| GNFP(A), as published                                | 1.0     | 0.9 | 1.8 | 0.2 | 4.0          |
| Less                                                 |         |     |     |     |              |
| Effect on farm inputs, wholesale trade and transport | 1.0     | 0.7 | 1.7 | 0.4 | 3.8          |
| Less                                                 |         |     |     |     |              |
| Effect on farmers' final expenditures                | 1.0     | 0.6 | 1.4 | 0.5 | 3.6          |

(a) At average 1989–90 prices.

Source: ABS, unpublished data, Constant Prices Estimates Section.

**S5.7 IMPACT OF THE GOOD FARM SEASON IN 1995–96 ON PERCENTAGE CHANGES, Trend estimates(a)**

|                                                      | 1995–96 |     |     |     | Jun qtr      |
|------------------------------------------------------|---------|-----|-----|-----|--------------|
|                                                      | Sep     | Dec | Mar | Jun | 1995 to 1996 |
|                                                      | %       | %   | %   | %   | %            |
| GDP(A), as published                                 | 1.2     | 1.4 | 1.2 | 0.8 | 4.7          |
| GNFP(A), as published                                | 0.9     | 1.2 | 1.1 | 0.8 | 4.1          |
| Less                                                 |         |     |     |     |              |
| Effect on farm inputs, wholesale trade and transport | 0.8     | 1.1 | 1.0 | 0.7 | 3.7          |
| Less                                                 |         |     |     |     |              |
| Effect on farmers' final expenditures                | 0.8     | 1.0 | 0.9 | 0.6 | 3.4          |

(a) At average 1989–90 prices.

Source: ABS, unpublished data, Constant Prices Estimates Section.

## Conclusion

This analysis shows that the change in fortune of the farm sector had a substantial impact on the quarterly growth rates of GDP in 1995–96. For example, table S5.5 shows that, under the assumptions described above, the good farm season in 1995–96 contributed 1.3 percentage points to the growth of the seasonally adjusted constant price estimates of GDP(A) between the June quarter 1995 and the June quarter 1996. Of this contribution, 0.8 percentage points were due to the primary effect of growth in gross farm product; 0.2 percentage points were due to the combined secondary and tertiary effects of the growth in farm intermediate inputs, wholesale trade and transport; and 0.3 percentage points

were due to the tertiary effects arising from higher final expenditures by farmers. However, while the extent and timing of the primary and the secondary effects are defined reasonably well, the same cannot be said of the tertiary effects: a number of important assumptions have to be made to derive estimates of them. Clearly, the most critical assumptions concern the extent and timing of final expenditures by farmers from the increased income they received in 1995–96. If they spent a substantial amount of the extra income shortly after they received it, then they would have boosted GDP growth considerably, particularly in the March quarter.

## Endnotes

<sup>1</sup> For annual estimates of gross farm product at average 1989–90 prices see table 49 of *Australian National Accounts: National Income, Expenditure and Product* (5206.0). Estimates of the increases in the constant price estimates of gross product for wholesale trade and transport attributable to the better farm season in 1995–96 have been made using sales data from the Australian Wheat Board and the Australian Barley Board, and margins and value added data from the 1989–90 and 1992–93 issues of *Australian National Accounts: Input-Output Tables* (5209.0).

<sup>2</sup> See *Information Paper: Australian National Accounts: Introduction to Input-Output Multipliers* (5246.0) for a comprehensive description. The multipliers used in this analysis are gross value added multipliers derived from data presented in the 1992–93 issue of *Australian National Accounts: Input-Output Tables* (5209.0). They are not published, but are available on request from Dr Annette Barbetti on Canberra (02) 6252 6908. The multipliers have been derived following a direct allocation of competing imports. This means that the multipliers take account of an increase in imports arising from an increase in expenditure in determining the impact on GDP.

<sup>3</sup> The total multiplier for farm intermediate inputs has been derived by taking a weighted average of the total multipliers for the following industries (total multipliers followed by the weights are shown in brackets): Agriculture (1.219, 0.2), Petroleum and coal products (0.815, 0.2), Chemicals (1.141, 0.2), Repairs (1.308, 0.1), Transport and storage (1.336, 0.15) and Wholesale trade (1.537, 0.15).

<sup>4</sup> The total multiplier for farmers' final expenditures has been derived by taking a weighted average of the total multipliers for the following industries (total multipliers followed by the weights are shown in brackets): Clothing and footwear (1.224, 0.1), Transport equipment (1.212, 0.2), Other machinery and equipment (1.250, 0.3), Construction (1.402, 0.1), Wholesale trade (1.537, 0.1) and Retail trade (1.589, 0.2).

<sup>5</sup> The problem encountered with the seasonal adjustment of crops arises because output does not occur in all quarters. The most common seasonal adjustment method used by the ABS is called the 'multiplicative method'. The original figures are divided by seasonal factors that are greater than one for seasonally high quarters and less than one for seasonally low quarters. Clearly, this method cannot be used for series such as crops which have zero output for some quarters every year. The 'additive method' is used by the ABS for series that have both positive and negative values, such as the increase in farm stocks. Seasonal factors that are positive for seasonally high quarters and negative for seasonally low quarters are subtracted from the original figures. However, when this method is applied to crop output it can lead to negative seasonally adjusted figures in the December and March quarters in years of low output, an outcome which makes no sense.

For the production-based measure of GDP, GDP(P), the primary effect of a good or bad crop season on the seasonally adjusted figures is in the September quarter via the gross product of agriculture. For both the income-based measure of GDP, GDP(I), and the expenditure-based measure of GDP, GDP(E), the primary effects are also in the September quarter. For GDP(I) it is via the gross operating surplus of agriculture (derived as seasonally adjusted output less seasonally adjusted costs), and for GDP(E) it is via the change in stocks (in subsequent quarters the rundown in stocks is offset by an increase in exports).

<sup>6</sup> On average, in 1995–96, stocks were turned over in 7.5 weeks by manufacturers, 6.7 weeks by wholesalers, and 6.8 weeks by retailers. These figures have been derived from current price estimates of the average level of stocks in 1995–96 and the total sales for 1995–96 from *Stocks and Sales, Selected Industries, Australia*, (5629.0) and *Retail Trade, Australia* (8501.0).

<sup>7</sup> If the multiplier effects following the initial effect follow a simple geometric progression, then the effect in the  $n$ th round is equal to the initial effect multiplier multiplied by  $r^n$ , where  $r = (m - i)/m$ . For farm intermediate inputs and farmers' final expenditures,  $m$  is the total multiplier and  $i$  is the initial effect multiplier. For wholesale trade and transport,  $m$  is the type 2A multiplier and the initial effect multiplier is equal to 1.  $n = 0$  for the initial effect,  $n = 1$  for the first round,  $n = 2$  for the second round, and so on. The following assumptions have been made also: the whole of the farm sector's extra intermediate inputs in 1995–96 were purchased at the end of November 1995; and the additional gross product of Wholesale trade and Transport and the extra final expenditures by farmers in 1995–96 took effect at the end of November 1995, the end of January 1996 and the end of April 1996.



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## Introduction

This chapter presents statistics and related information on Australia's international accounts, covering exports and imports of goods, international trade in services, international investment transactions, the current and capital transfers that are offsets to transactions that are undertaken without an exchange (for example, the gift of food), and the levels of Australia's foreign financial assets and liabilities.

These statistics are used by economic analysts and policy advisers to monitor, evaluate and forecast developments in Australia's external trade and external sector accounts for the purposes of domestic and international macro-economic analysis and policy determination. They are also used by governments, government agencies, businesses, industry associations, research institutions and others to analyse patterns of trade and assess particular types of transactions and financial claims and liabilities between Australian residents and non-residents, for purposes such as trade promotion and negotiations, market and industry performance studies, etc.

Transaction changes measured in the financial account of the balance of payments are identical to the transactions measured in the international investment position, as shown in diagram 30.1.

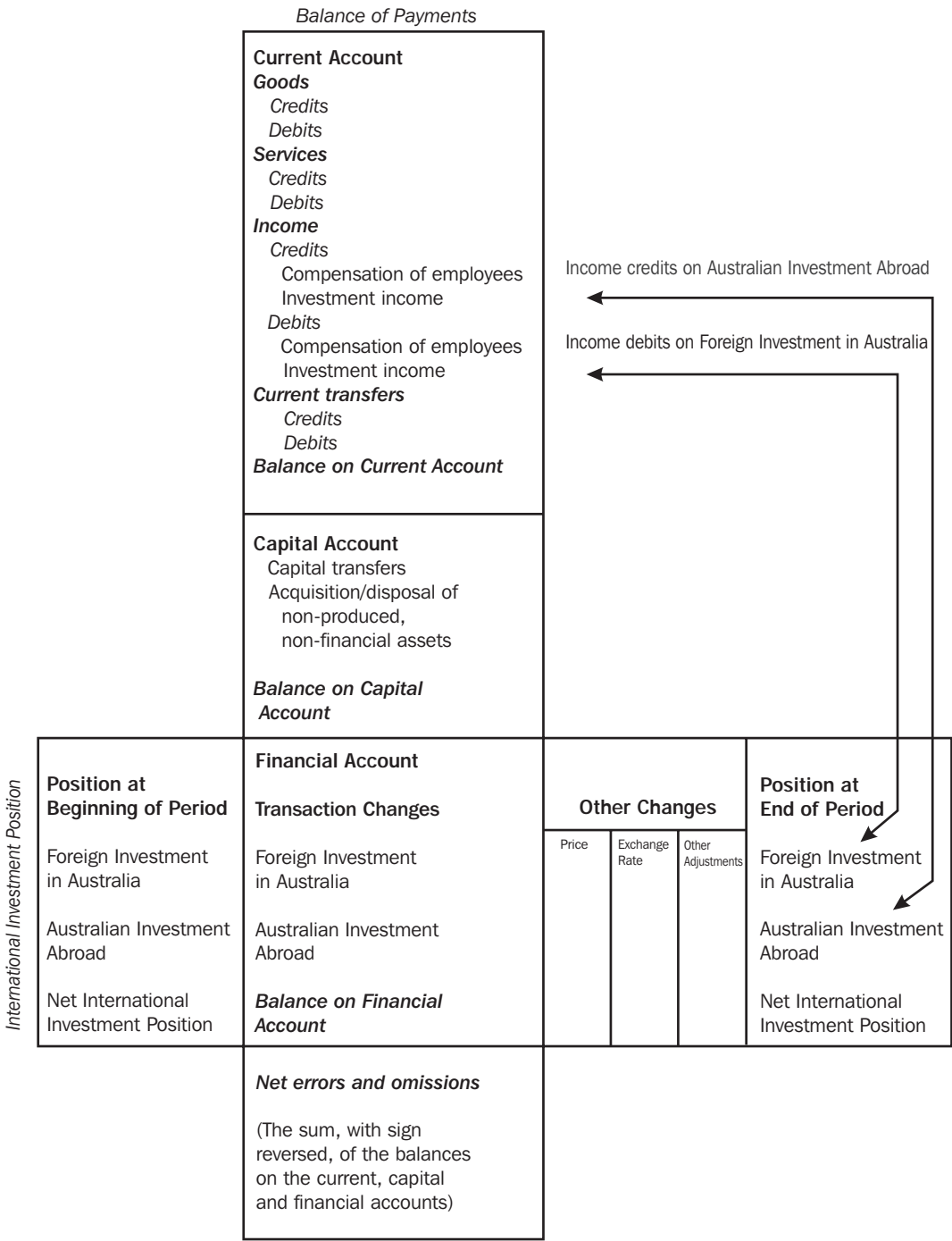
## International accounts

International accounts statistics cover the closely related and integrated statistics on Australia's balance of payments and international investment position. Diagram 30.1 presents the broad structure and relationship of these statistics.

Australia's balance of payments provides a statistical statement that systematically summarises the economic transactions between residents of Australia and residents of other countries. 'Residents', who may be people or businesses, need not be Australian nationals. Transactions cover the provision (changes in ownership) of goods, services, income, and financial claims on and liabilities to the rest of the world, and entries (such as gifts) classified as transfers that offset the provision of real and financial resources without anything provided in exchange.

Statistics about Australia's international investment position provide the balance sheet of the stock of foreign financial assets and liabilities of Australian residents. They integrate the balance sheet positions with information on increases and decreases in the levels of these assets and liabilities as a result of the changes due to transactions (investment flows, including reinvestment of earnings) as shown in the financial account of the balance of payments, together with the other changes (price, exchange rate and other adjustments) that affect the volume and value of the stock of financial assets and liabilities.

30.1 RELATIONSHIP BETWEEN THE BALANCE OF PAYMENTS AND INTERNATIONAL INVESTMENT POSITION STATEMENTS





## Foreign ownership in Australia

Statistics of foreign ownership in Australia presented in this chapter use levels data from Australia's international investment position to estimate the foreign ownership of equity in Australian enterprises.

## International merchandise trade

International merchandise trade statistics cover all movable goods which add to (imports) or subtract from (exports) Australia's stock of material resources. The statistics are compiled from information submitted by importers and exporters to the Australian Customs Service. Some goods are excluded for conceptual or practical reasons, for example those goods temporarily brought to Australia for subsequent forwarding to foreign destinations, and low-value imports and exports in the parcel post system.

The data about merchandise exports and imports are used in the compilation of the balance of payments. However, various adjustments relating to coverage, timing, classification and (for imports only) valuation are necessary before international merchandise trade statistics can be put on a balance of payments basis. Therefore, the merchandise exports and imports statistics, and the excess of exports (+) or imports (-), shown in the *International trade* section of this chapter, will differ from those shown in the *International accounts* section.

## International accounts

### Conceptual framework

Australia's international accounts statistics, which cover both the balance of payments and the international investment position, are compiled in accordance with international statistical standards. The concepts of residency, transactions, valuation, and time of recording are common to the balance of payments and international investment position statistics.

Until the June quarter 1997 reference period, these statistics were compiled in accordance with the Fourth Edition of the International Monetary Fund's *Balance of Payments Manual* (BPM4). From the September quarter 1997 reference period, these data are compiled by the ABS in accordance with the Fifth Edition of that manual (BPM5) which was published in 1993. In this edition of *Year Book Australia* the data are consistent with those compiled for the June

quarter 1997 issues of both *Balance of Payments, Australia* (5302.0) and *International Investment Position, Australia* (5306.0). However, they are represented here in accordance with the new structures and classifications of BPM5. Adoption of the BPM5 standards for all issues from the September quarter 1997 onwards will see further changes to the basis of compilation to more fully reflect the requirements of the new standards. For more information about the nature of the changes made to introduce the new IMF standard see the *ABS Information Paper: Implementing New International Statistical Standards in ABS International Accounts Statistics* (5364.0). For an assessment of the impact of the changes see the *ABS Information Paper: Upgraded Balance of Payments and International Investment Position Statistics* (5365.0).

The balance of payments accounts, which present systematically the economic transactions between Australia and the rest of the world, incorporate four types of economic transactions. The first involves the provision of real resources, i.e. transactions in goods, services and income. The second involves the provision of financial resources, i.e. foreign financial assets and liabilities. The third covers those one sided transactions of a current nature (described as current transfers) that are offsets to transactions in current real or financial resources that are undertaken without an exchange. Current resources are not associated with, nor finance, fixed assets. For example, famine relief, whether in cash or in kind, would have its offset in current transfers. The fourth type is capital transfers that offset transactions which are undertaken, without exchange, in fixed assets or in their financing (such as development aid). For example, migrants' funds represent the shift of the migrants' net worth to or from Australia, and are classified as capital transfers.

The first and third of these types of transactions comprise the current account, while the second type comprises the financial account. The fourth type (capital transfers), together with a minor item for the acquisition and disposal of non-produced, non-financial assets (such as patents), comprises the capital account.

The double entry accounting system is used for recording balance of payments transactions. Under this system, credit entries, which are shown with no arithmetic sign, are used to record the provision of real or financial resources. The credit entries are therefore required for exports of goods and services, and

for income earned by residents (a return for providing the use of financial capital to non-residents, or for providing the labour of Australian residents). Credit entries are also required for providing financial resources to the rest of the world, either as new liabilities (such as issuing bonds), or through returning existing assets (such as selling foreign equity securities to non-residents). Therefore, any credit entry in the financial account will reflect either an increase in Australia's foreign liabilities (more foreign debt or foreign ownership), or a decrease in Australia's foreign financial assets (such as a rundown in foreign exchange reserves).

Conversely, debit entries, which are identified by a minus sign (–), are used to record the provision by the rest of the world of real or financial resources to Australia, and are shown against imports of goods and services, income earned from Australia by non-residents, and financial transactions involving either an increase in foreign financial assets or a decrease in foreign liabilities.

Transactions in a double entry accounting system are reflected in pairs of equal credit and debit entries. For example, an export transaction for which payment is received through the banking system involves a credit entry for providing the good to a non-resident and a debit entry for being provided with foreign exchange assets due as payment for the export. Any entries that are not automatically paired in a transaction, i.e. for which there is no 'quid pro quo', are matched by special offsetting entries. Such offsetting entries are made in the categories 'current transfers' (when offsetting the provision of current resources such as food for famine relief) and 'capital transfers' (when offsetting the provision of capital resources such as development aid to build a new dam).

In principle, the net sum of all credit and debit entries is zero. In practice, some transactions are not measured accurately (errors), while others are not measured at all (omissions). Equality between the sums of the credit and debit entries is then brought about by the inclusion of a 'net errors and omissions' item which balances the accounts.

Transactions and other changes should be valued in the balance of payments at market prices. However, for practical reasons, transactions are generally valued in the statistics at transaction prices as this basis provides the closest practical approximation to the market price principle.

Transactions and other changes recorded in the balance of payments should be recorded at the time of change of ownership (either actual or imputed). For current account transactions, this occurs when ownership of goods changes, or services are provided. Investment income is recorded on a full accrual basis, that is, when it is earned. Reinvested earnings are calculated for the earnings of the period of account, using current replacement cost estimates of depreciation and excluding holding gains and losses. Current and capital transfers should be recorded when the goods, services, cash, etc., to which they are offsets, change ownership. Those transfers, such as taxes and fines, which are imposed by one party on another, should ideally be recorded at the time of the occurrence of the underlying transactions or other flows or events that give rise to the liability to pay. For the financial account transactions, the time of recording is at the change of ownership of the financial claims, which by convention is the time at which transactions are entered in the books of the transactors.

In practice, the nature of the available data sources is such that the time of recording of transactions will often differ from the time of change of ownership. Where practical, timing adjustments are made for transactions in certain goods to ensure that they are recorded in the time period in which change of ownership occurs.

International investment position statistics provide information on the levels (stock) of Australia's foreign financial assets and liabilities. The investment position at the end of a period reflects the foreign financial asset and liability positions at the start of the period, and the financial transactions (investment flows) from the balance of payments which increase and decrease these assets and liabilities, together with the non-transaction changes due to exchange rate effects, other price effects and changes in the volume of these assets and liabilities that are not due to transactions.

While the international investment position statistics form an integral part of Australia's balance of payments (see diagram 30.1), they are also useful in their own right, for example in determining the impact of foreign investment policies and the level of Australia's foreign assets and liabilities, including foreign debt. They are also useful when analysing the behaviour of financial markets.

As with the balance of payments, market price is the principal method of valuation in international investment position statistics, and financial assets and liabilities are recognised on a change of ownership basis, that is, at the time when the foreign financial asset or liability is acquired, sold, repaid or otherwise disposed of. By convention, this is generally taken to be the time at which the event is recorded in the books.

## Classifications

In the following tables, global estimates of the current, capital and financial accounts of the Australian international accounts are presented. Current and capital account transactions are generally recorded gross. This means that, for each item in the current and capital accounts, the credit entries are recorded separately from the debit entries. For example, goods credits are shown separately from goods debits. For each item in the financial account, however, debit and credit transactions are combined to produce a single result for the item which may be either a net credit or a net debit. For example, in a given period, foreign purchases of shares issued by companies in Australia (credit) are netted against foreign sales of similar shares (debit) and the net result is recorded in the financial account as either a net credit or a net debit.

The current account records transactions between Australian residents and non-residents in goods, services, income and current transfers. Goods are classified into five main components — general merchandise; goods for processing; goods procured in ports by carriers; repairs on goods; and non-monetary gold — which, with a few exceptions, change ownership from residents to non-residents (exports) and from non-residents to residents (imports). Services, comprising eleven primary components, cover services provided by Australian residents to non-residents (credits) and by non-residents to residents (debits), together with transactions in a few types of goods (for example, goods purchased by travellers). Income, comprising investment income (for example, dividends and interest) and compensation of employees (for example, wages), covers income earned by Australian residents from non-residents (credits) or by non-residents from residents (debits). Current transfers cover the offsetting entries required when resources are provided, without something of economic value being received in return by non-residents to Australian residents

(offsetting credits required) and by residents to non-residents (offsetting debits required). It includes general government transfers (for example, official foreign aid) and transfers by other sectors.

The capital account covers capital transfers (such as migrants' funds) and the acquisition/disposal of non-produced, non-financial assets.

The financial account shows transactions in foreign financial assets and liabilities. The primary split is by functional type of capital (direct investment, portfolio investment, other investment and reserve assets) further split into assets and liabilities (where appropriate). Within the asset and liability categories, details are presented of instruments of investment and, in some cases, sectors and contractual maturity.

The primary distinction used in international investment position statistics is between assets, which primarily represent Australian investment abroad, and liabilities, which primarily represent foreign investment in Australia, and the difference between the two represents the net position (see graph 30.11 and table 30.12). Broadly, Australian investment abroad refers to the stock of foreign financial assets owned by Australian residents, after netting off the liabilities of Australian direct investors to their direct investment enterprises abroad. Conversely, foreign investment in Australia refers to the stock of financial assets in Australia owned by non-residents, with the claims of direct investment enterprises on the foreign direct investors netted off the aggregate liability position. The first breakdown below this asset/liability dichotomy is by functional type of capital, with details of instruments of investment (see table 30.14) and, in some cases, sectors.

While many types of instruments of investment can be identified, for analytical reasons and ease of reporting similar instruments are combined.

- Equity capital includes ordinary and participating preference shares, units in trusts and net equity in branches.
- Re-investment of earnings of direct investors refers to income retained within the enterprise from after-tax profits attributable to direct investors.

- Debt securities include longer term, generally tradeable security instruments such as bonds and debentures, with a contractual maturity of more than one year after issue, together with money market instruments (for example, bills, commercial finance paper, negotiable certificates of deposit) with a contractual maturity of one year or less.
- Trade credits cover the direct extension by suppliers and buyers for goods and services, including advances for work in progress or to be undertaken.
- Loans cover the direct lending of funds either without a security evidencing the transaction, or with non-negotiable documentation. They include financial leases.
- Deposits comprise both transferable and other deposits.
- Other assets and liabilities consist of miscellaneous accounts in respect of interest, dividends, etc.

### Statistical overview

As shown in table 30.2, the balance on current account for 1996–97 was a deficit of \$17.5b, a decrease of \$3.8b (or 18%) on the deficit recorded for 1995–96. The decrease in the deficit in 1996–97 was largely due to a

turnaround in net goods and services, from a deficit of \$2.0b in 1995–96 to a surplus of \$1.5b, mostly due to a turnaround in net goods from a deficit of \$1.7b to a surplus of \$1.4b. Net services moved from a deficit of \$0.3b in 1995–96 to a surplus of \$0.1b. The net income deficit for 1996–97 was little changed at \$19.1b, with an increase in income credits of \$0.9b (13%) to \$7.9b being largely offset by an increase in income debits of \$0.8b (3%) to \$27.0b.

The balance on capital account increased slightly to a net inflow of \$1.1b.

The balance on financial account decreased by \$7.1b (32%) to a net inflow of \$15.4b, due to a decrease in net portfolio investment inflow of \$11.6b (94%) to a net inflow of only \$0.7b, and a much larger outflow in reserve assets, up \$4.4b to an outflow of \$5.2b. Partly offsetting these movements were increases in the net inflow in other investment, up \$6.1b to a net inflow of \$11.1b, and in net direct investment, up \$2.8b to a net inflow of \$8.7b. The increase in net direct investment was a result of a decrease of \$6.8b (76%) in outflows on direct investment abroad, to an outflow of \$2.2b, and a decrease in the inflow of direct investment in Australia of \$4.0b (27%) to \$10.9b.

## 30.2 BALANCE OF PAYMENTS, Summary

|                                                                   | 1991–92        | 1992–93        | 1993–94        | 1994–95        | 1995–96        | 1996–97        |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                                                   | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| Current account                                                   |                |                |                |                |                |                |
| Goods and services                                                |                |                |                |                |                |                |
| Goods                                                             |                |                |                |                |                |                |
| Credits                                                           | 55 423         | 60 634         | 64 419         | 67 000         | 75 804         | 80 646         |
| Debits                                                            | -51 469        | -59 934        | -64 863        | -75 218        | -77 553        | -79 254        |
| Net goods                                                         | 3 954          | 700            | -444           | -8 218         | -1 749         | 1 392          |
| Services                                                          |                |                |                |                |                |                |
| Credits                                                           | 14 269         | 15 891         | 18 573         | 20 315         | 22 771         | 24 257         |
| Debits                                                            | -17 331        | -18 723        | -20 280        | -22 019        | -23 063        | -24 116        |
| Net services                                                      | -3 062         | -2 832         | -1 707         | -1 704         | -292           | 141            |
| Net goods and services                                            | 892            | -2 132         | -2 151         | -9 922         | -2 041         | 1 533          |
| Income                                                            |                |                |                |                |                |                |
| Credits                                                           | 4 160          | 5 748          | 5 441          | 6 537          | 6 979          | 7 855          |
| Debits                                                            | -18 467        | -18 293        | -19 316        | -23 688        | -26 215        | -27 004        |
| Net income                                                        | -14 307        | -12 545        | -13 875        | -17 151        | -19 236        | -19 149        |
| Current transfers                                                 |                |                |                |                |                |                |
| Credits                                                           | 1 696          | 1 633          | 1 616          | 1 714          | 1 836          | 1 885          |
| Debits                                                            | -1 806         | -1 823         | -2 055         | -2 066         | -1 842         | -1 794         |
| Net current transfers                                             | -110           | -190           | -439           | -352           | -6             | 91             |
| <b>Balance on current account</b>                                 | <b>-13 525</b> | <b>-14 867</b> | <b>-16 465</b> | <b>-27 425</b> | <b>-21 283</b> | <b>-17 525</b> |
| Capital account                                                   |                |                |                |                |                |                |
| Capital transfers                                                 |                |                |                |                |                |                |
| Credits                                                           | 2 774          | 1 347          | 1 058          | 1 383          | 1 956          | 1 991          |
| Debits                                                            | -695           | -743           | -758           | -843           | -907           | -877           |
| Net capital transfers                                             | 2 079          | 604            | 300            | 540            | 1 049          | 1 114          |
| Net acquisition/disposal of non-produced,<br>non-financial assets | n.y.a.         | n.y.a.         | n.y.a.         | n.y.a.         | n.y.a.         | n.y.a.         |
| <b>Balance on capital account</b>                                 | <b>2 079</b>   | <b>604</b>     | <b>300</b>     | <b>540</b>     | <b>1 049</b>   | <b>1 114</b>   |
| Financial account                                                 |                |                |                |                |                |                |
| Direct investment                                                 |                |                |                |                |                |                |
| Abroad                                                            | -2 535         | -2 843         | -6 176         | -3 824         | -9 022         | -2 179         |
| In Australia                                                      | 6 837          | 5 469          | 5 811          | 7 295          | 14 948         | 10 928         |
| Total direct investment                                           | 4 302          | 2 626          | -365           | 3 471          | 5 926          | 8 749          |
| Portfolio investment                                              | -4 770         | 3 445          | 12 254         | 8 855          | 12 357         | 738            |
| Other investment                                                  | 10 966         | 3 929          | 1 342          | 8 556          | 5 017          | 11 136         |
| Reserve assets                                                    | 3 929          | 3 949          | -1 037         | 1 971          | -817           | -5 230         |
| <b>Balance on financial account</b>                               | <b>14 427</b>  | <b>13 949</b>  | <b>12 194</b>  | <b>22 853</b>  | <b>22 483</b>  | <b>15 393</b>  |
| <b>Net errors and omissions</b>                                   | <b>-2 981</b>  | <b>314</b>     | <b>3 971</b>   | <b>4 032</b>   | <b>-2 249</b>  | <b>1 018</b>   |

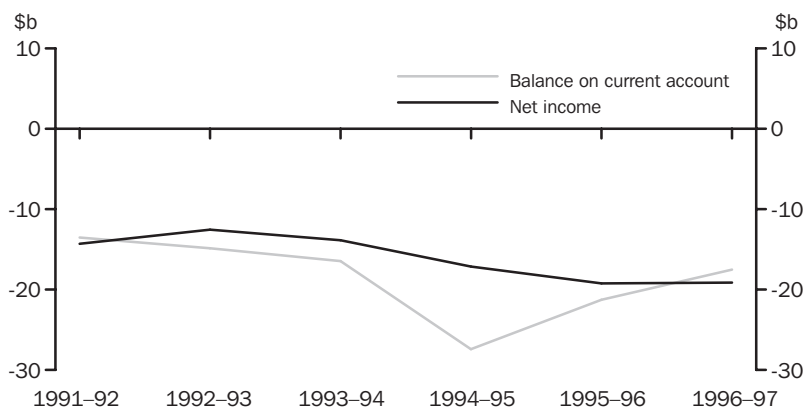
(a) Balance of payments basis.

Source: *Balance of Payments and International Investment Position, Australia (5302.0)*.

Graph 30.3 illustrates the importance of net income to the balance on current account. The net income deficit accounted for the bulk of the current account deficit in most years between 1991–92 and 1996–97. In 1994–95 the net

income deficit of \$17.2b was accompanied by a net goods and services deficit of \$9.9b to account for most of the current account deficit of \$27.4b.

## 30.3 BALANCE ON CURRENT ACCOUNT COMPARED TO NET INCOME



Source: Balance of Payments and International Investment Position, Australia (5302.0).

Table 30.4 shows both annual levels of official reserve assets and end of year and period

average exchange rates for the major currencies and special drawing rights.

## 30.4 RESERVE ASSETS AND EXCHANGE RATES

|                                                                       | 1991-92       | 1992-93       | 1993-94       | 1994-95       | 1995-96       | 1996-97       |
|-----------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| RESERVE ASSETS (\$m)                                                  |               |               |               |               |               |               |
| Monetary gold                                                         | 3 639         | 4 448         | 4 208         | 4 316         | 3 825         | 1 757         |
| Special drawing rights                                                | 375           | 133           | 110           | 95            | 57            | 37            |
| Reserve position in IMF                                               | 471           | 855           | 749           | 753           | 615           | 627           |
| Foreign exchange                                                      |               |               |               |               |               |               |
| Total foreign exchange                                                | 17 755        | 15 387        | 15 594        | 15 021        | 14 562        | 20 415        |
| <b>Total reserve assets</b>                                           | <b>22 240</b> | <b>20 823</b> | <b>20 661</b> | <b>20 185</b> | <b>19 059</b> | <b>22 836</b> |
| EXCHANGE RATES                                                        |               |               |               |               |               |               |
| End of period                                                         |               |               |               |               |               |               |
| United States dollar                                                  | 0.7488        | 0.6722        | 0.7291        | 0.7086        | 0.7890        | 0.7455        |
| United Kingdom pound                                                  | 0.3945        | 0.4453        | 0.4721        | 0.4452        | 0.5099        | 0.4482        |
| German mark                                                           | 1.144         | 1.137         | 1.159         | 0.981         | 1.200         | 1.295         |
| Japanese yen                                                          | 94.05         | 71.54         | 72.20         | 60.08         | 86.48         | 85.20         |
| Special drawing right                                                 | 0.5213        | 0.4818        | 0.5026        | 0.4539        | 0.5476        | 0.5347        |
| Period average(a)                                                     |               |               |               |               |               |               |
| United States dollar                                                  | 0.7694        | 0.7030        | 0.6919        | 0.7427        | 0.7593        | 0.7828        |
| United Kingdom pound                                                  | 0.4381        | 0.4363        | 0.4623        | 0.4705        | 0.4909        | 0.4851        |
| German mark                                                           | 1.274         | 1.103         | 1.171         | 1.120         | 1.109         | 1.251         |
| Japanese yen                                                          | 100.97        | 84.22         | 73.52         | 70.35         | 77.66         | 90.51         |
| Special drawing right                                                 | 0.5580        | 0.4982        | 0.4944        | 0.4972        | 0.5156        | 0.5521        |
| TRADE-WEIGHTED INDEX OF VALUE OF THE AUSTRALIAN DOLLAR (MAY 1970=100) |               |               |               |               |               |               |
| End of period                                                         | 55.2          | 49.5          | 53.0          | 48.4          | 58.1          | 56.7          |
| Period average(a)                                                     | 58.2          | 52.3          | 51.4          | 52.8          | 54.8          | 58.7          |

(a) These exchange rates and index numbers are derived by averaging figures for each trading day.

Source: Reserve Bank of Australia for reserve assets and exchange rates in respect of each trading day.

## International trade in goods and services (balance of payments basis)

Tables 30.5 and 30.6 show annual values of Australian exports (credits) and imports (debits) of goods and services at current and constant (average 1989–90) prices. These estimates are compiled quarterly on a balance of payments basis within the framework outlined above.

The current price value of a transaction may be expressed conceptually as the product of a price and quantity. The value of the transaction at constant prices may then be thought of as being derived by substituting, for the current price, the corresponding price in the chosen base year.

There are, however, many transactions recorded in statistics of international trade in goods and services for which it is not possible to apply such an approach. In such cases it is necessary to make assumptions and approximations (e.g. revaluing by means of the price index which is considered to be most closely related to the commodity involved). The published estimates at constant prices should be viewed in this light.

The balance on goods and services recorded a surplus of \$1.5b in 1996–97 at current prices. Goods credits rose 6% to \$80.6b, with significant increases recorded in transport equipment; ‘other goods’ (mainly gold); cereal grains and

‘other’ mineral fuels. Significant decreases were recorded in metals (excluding gold); and meat. Goods debits increased 2% to \$79.3b. The most significant increases occurred in fuels and lubricants; and non-industrial transport equipment. The most significant decreases were recorded in machinery and industrial equipment; and telecommunications equipment.

In current price terms, services credits increased by 7% to \$24.3b in 1996–97, while services debits increased by 5% to \$24.1b.

In constant price terms, goods and services credits increased by \$9.3b (9%) in 1996–97 largely due to an 11% increase in goods credits. Goods and services debits increased by \$9.8b (10%) mainly due to an 11% increase in goods debits.

The components of goods are defined in terms of groupings of items in the United Nations *Standard International Trade Classification Revision 3* (SITC Rev. 3).

Australia’s terms of trade rose 4% in 1996–97, resulting from a 3% fall in the implicit price deflator, or IPD (current prices over average 1989–90 prices), for exports of goods and services, and a fall of 7% in the IPD for imports of goods and services. Goods credits recorded a 4% decrease in its IPD partly offset by a 1% increase recorded for the services credits IPD. For goods debits the deflator fell 8%, while the services deflator fell by 2% (table 30.7).



## 30.5 GOODS AND SERVICES CREDITS

|                                         | 1991-92       | 1992-93       | 1993-94       | 1994-95       | 1995-96       | 1996-97        |
|-----------------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|
|                                         | \$m           | \$m           | \$m           | \$m           | \$m           | \$m            |
| AT CURRENT PRICES                       |               |               |               |               |               |                |
| <b>Goods credits</b>                    |               |               |               |               |               |                |
| General merchandise                     |               |               |               |               |               |                |
| Rural goods                             |               |               |               |               |               |                |
| Meat and meat preparations              | 3 434         | 3 750         | 4 043         | 3 654         | 3 292         | 2 955          |
| Cereal grains and cereal preparations   | 2 352         | 2 954         | 3 205         | 2 523         | 4 926         | 5 950          |
| Sugar, sugar preparations and honey     | 747           | 1 072         | 1 315         | 1 730         | 1 712         | 1 695          |
| Wool and sheepskins                     | 3 829         | 3 367         | 3 369         | 4 216         | 3 664         | 3 740          |
| Other rural                             | 5 241         | 5 937         | 6 513         | 6 922         | 7 706         | 8 389          |
| <i>Total rural goods</i>                | <i>15 603</i> | <i>17 080</i> | <i>18 445</i> | <i>19 045</i> | <i>21 300</i> | <i>22 729</i>  |
| Non-rural goods                         |               |               |               |               |               |                |
| Metal ores and minerals                 | 7 938         | 7 943         | 7 671         | 7 968         | 9 088         | 9 396          |
| Coal, coke and briquettes               | 6 949         | 7 620         | 7 253         | 6 936         | 7 843         | 8 008          |
| Other mineral fuels                     | 3 402         | 3 913         | 3 351         | 3 794         | 4 165         | 5 150          |
| Metals (excluding non-monetary gold)    | 4 702         | 5 210         | 5 396         | 6 097         | 6 799         | 6 050          |
| Machinery                               | 3 471         | 4 344         | 5 293         | 6 035         | 7 119         | 6 977          |
| Transport equipment                     | 1 655         | 2 022         | 2 087         | 2 047         | 2 500         | 3 652          |
| Other manufactures                      | 5 268         | 6 026         | 6 966         | 7 907         | 8 755         | 9 095          |
| Other non-rural                         | 1 281         | 1 284         | 1 839         | 1 710         | 2 040         | 2 257          |
| <i>Total non-rural goods</i>            | <i>34 666</i> | <i>38 362</i> | <i>39 856</i> | <i>42 494</i> | <i>48 309</i> | <i>50 585</i>  |
| <i>Total general merchandise</i>        | <i>50 269</i> | <i>55 442</i> | <i>58 301</i> | <i>61 539</i> | <i>69 609</i> | <i>73 314</i>  |
| Other goods                             | 5 154         | 5 192         | 6 118         | 5 461         | 6 195         | 7 332          |
| Total goods credits                     | 55 423        | 60 634        | 64 419        | 67 000        | 75 804        | 80 646         |
| Services credits                        | 14 269        | 15 891        | 18 573        | 20 315        | 22 771        | 24 257         |
| <b>Total goods and services credits</b> | <b>69 692</b> | <b>76 525</b> | <b>82 992</b> | <b>87 315</b> | <b>98 575</b> | <b>104 903</b> |
| AT AVERAGE 1989-90 PRICES               |               |               |               |               |               |                |
| <b>Goods credits</b>                    |               |               |               |               |               |                |
| General merchandise                     |               |               |               |               |               |                |
| Rural goods                             |               |               |               |               |               |                |
| Meat and meat preparations              | 3 510         | 3 766         | 3 828         | 3 731         | 3 641         | 3 546          |
| Cereal grains and cereal preparations   | 2 712         | 3 105         | 3 810         | 2 675         | 3 928         | 5 476          |
| Sugar, sugar preparations and honey     | 921           | 1 227         | 1 345         | 1 654         | 1 698         | 1 759          |
| Wool and sheepskins                     | 5 783         | 5 205         | 5 429         | 5 038         | 4 815         | 5 203          |
| Other rural                             | 5 229         | 5 655         | 5 952         | 5 981         | 6 454         | 7 330          |
| <i>Total rural goods</i>                | <i>18 155</i> | <i>18 958</i> | <i>20 364</i> | <i>19 079</i> | <i>20 536</i> | <i>23 314</i>  |
| Non-rural goods                         |               |               |               |               |               |                |
| Metal ores and minerals                 | 8 757         | 8 806         | 9 449         | 9 936         | 10 517        | 11 150         |
| Coal, coke and briquettes               | 6 923         | 7 227         | 7 207         | 7 554         | 7 727         | 8 079          |
| Other mineral fuels                     | 2 885         | 3 155         | 3 159         | 3 562         | 3 782         | 4 153          |
| Metals (excluding non-monetary gold)    | 5 700         | 6 163         | 6 751         | 6 389         | 6 981         | 7 084          |
| Machinery                               | 3 669         | 4 572         | 5 930         | 7 203         | 9 282         | 9 450          |
| Transport equipment                     | 1 548         | 1 670         | 1 634         | 1 608         | 2 064         | 3 108          |
| Other manufactures                      | 5 486         | 6 054         | 6 897         | 7 849         | 8 638         | 9 309          |
| Other non-rural                         | 1 383         | 1 370         | 1 902         | 1 805         | 2 137         | 2 318          |
| <i>Total non-rural goods</i>            | <i>36 351</i> | <i>39 017</i> | <i>42 929</i> | <i>45 906</i> | <i>51 128</i> | <i>54 651</i>  |
| <i>Total general merchandise</i>        | <i>54 506</i> | <i>57 975</i> | <i>63 293</i> | <i>64 985</i> | <i>71 664</i> | <i>77 965</i>  |
| Other goods                             | 5 789         | 5 468         | 5 995         | 5 658         | 6 462         | 8 369          |
| Total goods credits                     | 60 295        | 63 443        | 69 288        | 70 643        | 78 126        | 86 334         |
| Service credits                         | 13 481        | 15 068        | 16 895        | 18 870        | 20 465        | 21 586         |
| <b>Total goods and services credits</b> | <b>73 776</b> | <b>78 511</b> | <b>86 183</b> | <b>89 513</b> | <b>98 591</b> | <b>107 920</b> |

Source: Balance of Payments and International Investment Position, Australia (5302.0).



## 30.6 GOODS AND SERVICES DEBITS

|                                                       | 1991-92        | 1992-93        | 1993-94        | 1994-95        | 1995-96         | 1996-97         |
|-------------------------------------------------------|----------------|----------------|----------------|----------------|-----------------|-----------------|
|                                                       | \$m            | \$m            | \$m            | \$m            | \$m             | \$m             |
| Current transactions                                  |                |                |                |                |                 |                 |
| AT CURRENT PRICES                                     |                |                |                |                |                 |                 |
| <b>Goods debits</b>                                   |                |                |                |                |                 |                 |
| General merchandise                                   |                |                |                |                |                 |                 |
| Consumption goods                                     |                |                |                |                |                 |                 |
| Food and beverages, mainly for consumption            | -2 028         | -2 261         | -2 430         | -2 592         | -2 760          | -2 882          |
| Household electrical items                            | -1 257         | -1 382         | -1 436         | -1 744         | -1 766          | -1 886          |
| Non-industrial transport equipment                    | -2 777         | -3 478         | -3 800         | -4 758         | -4 436          | -5 147          |
| Textiles, clothing and footwear                       | -1 799         | -2 178         | -2 320         | -2 566         | -2 726          | -2 883          |
| Toys, books and leisure goods                         | -2 015         | -2 238         | -2 496         | -2 545         | -2 534          | -2 573          |
| Consumption goods, n.e.s.                             | -3 793         | -4 389         | -4 751         | -5 213         | -5 638          | -5 933          |
| <i>Total consumption goods</i>                        | <i>-13 669</i> | <i>-15 926</i> | <i>-17 233</i> | <i>-19 418</i> | <i>-19 860</i>  | <i>-21 304</i>  |
| Capital goods                                         |                |                |                |                |                 |                 |
| Machinery and industrial equipment                    | -4 320         | -5 446         | -6 414         | -7 897         | -8 326          | -8 022          |
| ADP equipment                                         | -1 915         | -2 319         | -2 629         | -3 232         | -3 593          | -3 717          |
| Telecommunications equipment                          | -949           | -1 224         | -1 182         | -1 804         | -1 996          | -1 749          |
| Civil aircraft                                        | -1 685         | -828           | -241           | -529           | -688            | -781            |
| Industrial transport equipment n.e.s.                 | -1 240         | -1 838         | -2 084         | -2 714         | -2 214          | -2 177          |
| Capital goods, n.e.s.                                 | -1 788         | -2 000         | -2 293         | -2 365         | -2 366          | -2 436          |
| <i>Total capital goods</i>                            | <i>-11 897</i> | <i>-13 655</i> | <i>-14 843</i> | <i>-18 541</i> | <i>-19 183</i>  | <i>-18 882</i>  |
| Intermediate and other merchandise goods              |                |                |                |                |                 |                 |
| Food and beverages, mainly for industry               | -388           | -436           | -509           | -774           | -700            | -641            |
| Primary industrial supplies n.e.s.                    | -586           | -677           | -701           | -901           | -879            | -839            |
| Fuels and lubricants                                  | -2 715         | -3 623         | -3 317         | -3 566         | -4 163          | -5 002          |
| Parts for transport equipment                         | -2 941         | -3 675         | -4 183         | -4 714         | -4 600          | -4 608          |
| Parts for ADP equipment                               | -1 278         | -1 423         | -1 681         | -1 858         | -1 857          | -1 758          |
| Other parts for capital goods                         | -3 580         | -4 236         | -5 047         | -5 975         | -6 393          | -6 509          |
| Organic and inorganic chemicals                       | -1 804         | -2 056         | -2 102         | -2 431         | -2 754          | -2 743          |
| Paper and paperboard                                  | -1 295         | -1 381         | -1 465         | -1 794         | -1 868          | -1 714          |
| Textile yarn and fabrics                              | -1 680         | -1 763         | -1 869         | -2 036         | -1 922          | -1 817          |
| Iron and steel                                        | -822           | -946           | -1 039         | -1 285         | -1 408          | -1 300          |
| Plastics                                              | -1 086         | -1 272         | -1 375         | -1 646         | -1 685          | -1 576          |
| Processed industrial supplies n.e.s.                  | -5 890         | -6 971         | -7 586         | -8 290         | -8 400          | -8 220          |
| Other merchandise goods                               | -243           | -208           | -286           | -391           | -337            | -310            |
| <i>Total intermediate and other merchandise goods</i> | <i>-24 308</i> | <i>-28 667</i> | <i>-31 160</i> | <i>-35 661</i> | <i>-36 966</i>  | <i>-37 037</i>  |
| <i>Total general merchandise</i>                      | <i>-49 874</i> | <i>-58 248</i> | <i>-63 236</i> | <i>-73 620</i> | <i>-76 009</i>  | <i>-77 223</i>  |
| Other goods                                           | -1 595         | -1 686         | -1 627         | -1 598         | -1 544          | -2 031          |
| <b>Total goods debits</b>                             | <b>-51 469</b> | <b>-59 934</b> | <b>-64 863</b> | <b>-75 218</b> | <b>-77 553</b>  | <b>-79 254</b>  |
| Services debits                                       | -17 331        | -18 723        | -20 280        | -22 019        | -23 063         | -24 116         |
| <b>Total goods and services debits</b>                | <b>-68 800</b> | <b>-78 657</b> | <b>-85 143</b> | <b>-97 237</b> | <b>-100 616</b> | <b>-103 370</b> |

Source: Balance of Payments and International Investment Position, Australia (5302.0).

30.6 GOODS AND SERVICES DEBITS — *continued*

|                                                       | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97  |
|-------------------------------------------------------|---------|---------|---------|---------|---------|----------|
|                                                       | \$m     | \$m     | \$m     | \$m     | \$m     | \$m      |
| AT AVERAGE 1989-90 PRICES                             |         |         |         |         |         |          |
| <b>Goods debits</b>                                   |         |         |         |         |         |          |
| General merchandise                                   |         |         |         |         |         |          |
| Consumption goods                                     |         |         |         |         |         |          |
| Food and beverages, mainly for consumption            | -1 924  | -2 010  | -2 203  | -2 325  | -2 366  | -2 500   |
| Household electrical items                            | -1 291  | -1 299  | -1 308  | -1 678  | -1 762  | -2 021   |
| Non-industrial transport equipment                    | -2 436  | -2 607  | -2 539  | -3 096  | -2 919  | -3 634   |
| Textiles, clothing and footwear                       | -1 740  | -1 965  | -2 081  | -2 438  | -2 631  | -2 825   |
| Toys, books and leisure goods                         | -1 913  | -2 025  | -2 205  | -2 340  | -2 260  | -2 360   |
| Consumption goods n.e.s.                              | -3 564  | -3 830  | -4 036  | -4 570  | -4 929  | -5 480   |
| <i>Total consumption goods</i>                        | -12 868 | -13 736 | -14 372 | -16 447 | -16 867 | -18 820  |
| Capital goods                                         |         |         |         |         |         |          |
| Machinery and industrial equipment                    | -3 983  | -4 442  | -5 043  | -6 340  | -6 728  | -6 921   |
| ADP equipment                                         | -2 552  | -3 437  | -4 613  | -6 728  | -8 843  | -11 050  |
| Telecommunications equipment                          | -972    | -1 149  | -1 050  | -1 811  | -2 303  | -2 873   |
| Civil aircraft                                        | -1 588  | -704    | -194    | -449    | -596    | -692     |
| Industrial transport equipment n.e.s.                 | -1 109  | -1 314  | -1 368  | -1 806  | -1 433  | -1 486   |
| Capital goods n.e.s.                                  | -1 686  | -1 664  | -1 859  | -1 951  | -1 972  | -2 154   |
| <i>Total capital goods</i>                            | -11 890 | -12 710 | -14 127 | -19 085 | -21 875 | -25 176  |
| Intermediate and other merchandise goods              |         |         |         |         |         |          |
| Food and beverages, mainly for industry               | -392    | -444    | -489    | -514    | -481    | -490     |
| Primary industrial supplies n.e.s.                    | -639    | -676    | -686    | -796    | -731    | -727     |
| Fuels and lubricants                                  | -2 679  | -3 259  | -3 252  | -3 434  | -3 955  | -4 262   |
| Parts for transport equipment                         | -2 799  | -3 157  | -3 350  | -3 797  | -3 743  | -4 063   |
| Parts for ADP equipment                               | -1 703  | -2 109  | -2 942  | -3 867  | -4 550  | -5 223   |
| Other parts for capital goods                         | -3 373  | -3 624  | -4 299  | -5 339  | -5 989  | -6 589   |
| Organic and inorganic chemicals                       | -1 897  | -2 168  | -2 391  | -2 629  | -2 780  | -2 943   |
| Paper and paperboard                                  | -1 351  | -1 435  | -1 533  | -1 944  | -1 694  | -1 812   |
| Textile yarn and fabrics                              | -1 606  | -1 716  | -1 883  | -2 118  | -1 984  | -2 240   |
| Iron and steel                                        | -845    | -971    | -1 075  | -1 383  | -1 399  | -1 387   |
| Plastics                                              | -1 224  | -1 330  | -1 381  | -1 593  | -1 459  | -1 486   |
| Processed industrial supplies n.e.s.                  | -5 947  | -6 550  | -6 888  | -7 565  | -7 414  | -7 616   |
| Other merchandise goods                               | -248    | -203    | -279    | -387    | -333    | -337     |
| <i>Total intermediate and other merchandise goods</i> | -24 703 | -27 642 | -30 448 | -35 366 | -36 512 | -39 175  |
| <i>Total general merchandise</i>                      | -49 461 | -54 088 | -58 947 | -70 898 | -75 254 | -83 171  |
| Other goods                                           | -1 615  | -1 536  | -1 471  | -1 498  | -1 434  | -1 941   |
| <b>Total goods debits</b>                             | -51 076 | -55 624 | -60 418 | -72 396 | -76 688 | -85 112  |
| Services debits                                       | -15 943 | -16 125 | -17 206 | -18 792 | -19 289 | -20 644  |
| <b>Total goods and services debits</b>                | -67 019 | -71 749 | -77 624 | -91 188 | -95 977 | -105 756 |

Source: Balance of Payments and International Investment Position, Australia (5302.0).

## 30.7 IMPLICIT PRICE DEFLATORS AND TERMS OF TRADE

|                                                | 1991–92      | 1992–93      | 1993–94      | 1994–95      | 1995–96      | 1996–97     |
|------------------------------------------------|--------------|--------------|--------------|--------------|--------------|-------------|
| Implicit Price Deflators (base 1989–90=100)(a) |              |              |              |              |              |             |
| Goods, credits                                 | 91.9         | 95.6         | 93.0         | 94.8         | 97.0         | 93.4        |
| Services, credits                              | 105.8        | 105.5        | 109.9        | 107.7        | 111.3        | 112.4       |
| <b>Total exports of goods and services</b>     | <b>94.5</b>  | <b>97.5</b>  | <b>96.3</b>  | <b>97.5</b>  | <b>100.0</b> | <b>97.2</b> |
| Goods, debits                                  | 100.8        | 107.7        | 107.4        | 103.9        | 101.1        | 93.1        |
| Services, debits                               | 108.7        | 116.1        | 117.9        | 117.2        | 119.6        | 116.8       |
| <b>Total imports of goods and services</b>     | <b>102.7</b> | <b>109.6</b> | <b>109.7</b> | <b>106.6</b> | <b>104.8</b> | <b>97.7</b> |
| Terms of trade (base 1989–90=100)(b)           |              |              |              |              |              |             |
| Goods                                          | 91.2         | 88.7         | 86.6         | 91.3         | 95.9         | 100.3       |
| Services                                       | 97.4         | 90.8         | 93.3         | 91.9         | 93.1         | 96.2        |
| <b>Goods and services</b>                      | <b>92.0</b>  | <b>88.9</b>  | <b>87.8</b>  | <b>91.5</b>  | <b>95.4</b>  | <b>99.4</b> |

(a) Derived by dividing the estimates at current prices in tables 30.5 and 30.6 by the estimates at average 1989–90 prices in those tables. (b) Derived by dividing the IPDs for export/credits by the IPDs for imports/debits.

Source: *Balance of Payments and International Investment Position, Australia* (5302.0).

### International trade in services

In current price terms, the net services for 1996–97 recorded a surplus of \$0.1b, a turnaround from a deficit of \$0.3b in 1995–96. Service credits increased by \$1.5b (7%) to \$24.3b, mainly due to an increase in the travel credits. Service debits increased by \$1.1b (5%) to \$24.1b, mainly due to travel debits. Table 30.8 provides details of the international trade in services.

As shown in Table 30.9, the main destinations for services exports (credits) in 1995–96 (the

latest year available for regional data) were: Japan (16%), the United States (16%), the United Kingdom (8%), Singapore (6%) and Asia n.e.s. (6%). Significant growth has been recorded in services exports to Japan, the United States, Singapore and Asia n.e.s. since 1990–91. The main source countries for services imports (debits) in 1995–96, as shown in Table 30.10, were: the United States (17%), the United Kingdom (16%), Asia n.e.s. (8%), Europe n.e.s. (7%) and Japan (7%). Significant growth has been recorded in services imports from the United Kingdom, China and Indonesia since 1990–91.

## 30.8 INTERNATIONAL TRADE IN SERVICES

|                                                    | 1991-92        | 1992-93        | 1993-94        | 1994-95        | 1995-96        | 1996-97        |
|----------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                                    | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| <b>CREDITS</b>                                     |                |                |                |                |                |                |
| Transportation services                            |                |                |                |                |                |                |
| Sea transport                                      | 1 543          | 1 643          | 2 211          | 1 127          | 1 221          | 944            |
| Air transport                                      | 3 156          | 3 641          | 3 732          | 4 951          | 5 401          | 5 909          |
| <i>Total transportation services</i>               | 4 699          | 5 284          | 5 943          | 6 078          | 6 622          | 6 853          |
| Travel services                                    |                |                |                |                |                |                |
| Business                                           | 484            | 517            | 582            | 677            | 797            | 665            |
| Personal                                           | 5 713          | 6 502          | 7 692          | 9 279          | 10 455         | 11 232         |
| <i>Total travel services</i>                       | 6 197          | 7 019          | 8 274          | 9 956          | 11 252         | 11 897         |
| Communications services                            | 781            | 787            | 754            | 779            | 860            | 930            |
| Construction services                              | 48             | 98             | 16             | 105            | 67             | 136            |
| Insurance services                                 | 136            | 164            | 652            | 389            | 630            | 744            |
| Financial services                                 | 302            | 301            | 475            | 390            | 411            | 444            |
| Computer and information services                  | 285            | 216            | 242            | 218            | 218            | 240            |
| Royalties and licence fees                         | 177            | 252            | 289            | 320            | 333            | 342            |
| Other business services                            |                |                |                |                |                |                |
| Merchanting and other trade-related                | 120            | 146            | 143            | 256            | 290            | 406            |
| Operational leasing                                | 19             | 20             | 11             | 12             | 6              | 14             |
| Miscellaneous business, professional and technical | 888            | 926            | 1 041          | 1 073          | 1 276          | 1 405          |
| <i>Total other business services</i>               | 1 027          | 1 092          | 1 195          | 1 341          | 1 572          | 1 825          |
| Personal, cultural and recreational services       | 158            | 203            | 180            | 185            | 249            | 285            |
| Government services n.e.i.                         | 459            | 475            | 553            | 554            | 557            | 561            |
| <b>Total credits</b>                               | <b>14 269</b>  | <b>15 891</b>  | <b>18 573</b>  | <b>20 315</b>  | <b>22 771</b>  | <b>24 257</b>  |
| <b>DEBITS</b>                                      |                |                |                |                |                |                |
| Transportation services                            |                |                |                |                |                |                |
| Sea transport                                      | -3 108         | -3 543         | -4 113         | -5 159         | -5 161         | -5 130         |
| Air transport                                      | -2 752         | -2 798         | -2 812         | -3 199         | -3 421         | -3 520         |
| <i>Total transportation services</i>               | -5 860         | -6 341         | -6 925         | -8 358         | -8 582         | -8 650         |
| Travel services                                    |                |                |                |                |                |                |
| Business                                           | -997           | -1 173         | -1 415         | -1 697         | -2 055         | -2 286         |
| Personal                                           | -4 037         | -4 257         | -4 200         | -4 575         | -4 933         | -5 489         |
| <i>Total travel services</i>                       | -5 034         | -5 430         | -5 615         | -6 272         | -6 988         | -7 775         |
| Communications services                            | -879           | -847           | -960           | -1 008         | -1 041         | -1 056         |
| Construction services                              | -44            | -45            | -6             | -34            | -28            | -56            |
| Insurance services                                 | -415           | -682           | -1 015         | -1 022         | -920           | -1 000         |
| Financial services                                 | -250           | -294           | -340           | -282           | -276           | -298           |
| Computer and information services                  | -203           | -192           | -195           | -200           | -204           | -243           |
| Royalties and license fees                         | -1 119         | -1 132         | -1 289         | -1 311         | -1 341         | -1 401         |
| Other business services                            |                |                |                |                |                |                |
| Merchanting and other trade-related                | -198           | -233           | -204           | -250           | -274           | -327           |
| Operational leasing                                | -1 210         | -1 262         | -1 437         | -1 041         | -1 032         | -818           |
| Miscellaneous business, professional and technical | -1 148         | -1 221         | -1 198         | -1 184         | -1 254         | -1 407         |
| <i>Total other business services</i>               | -2 556         | -2 716         | -2 839         | -2 475         | -2 560         | -2 552         |
| Personal, cultural and recreational services       | -464           | -466           | -533           | -519           | -554           | -566           |
| Government services n.e.i.                         | -507           | -578           | -563           | -538           | -569           | -519           |
| <b>Total debits</b>                                | <b>-17 331</b> | <b>-18 723</b> | <b>-20 280</b> | <b>-22 019</b> | <b>-23 063</b> | <b>-24 116</b> |

Source: Balance of Payments and International Investment Position, Australia (5302.0).

## 30.9 SERVICES CREDITS, By Country and Country Group

|                                                 | 1990-91       | 1991-92       | 1992-93       | 1993-94       | 1994-95       | 1995-96       |
|-------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                                 | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           |
| Countries                                       |               |               |               |               |               |               |
| Belgium and Luxembourg                          | 22            | 29            | 17            | 28            | 44            | 52            |
| Canada                                          | 260           | 247           | 210           | 283           | 232           | 287           |
| Central America and Caribbean, excluding Mexico | 69            | 100           | 19            | 20            | 18            | 14            |
| China, People's Republic of                     | 236           | 185           | 256           | 310           | 364           | 368           |
| Fiji                                            | 66            | 64            | 60            | 80            | 77            | 73            |
| France                                          | 126           | 113           | 160           | 210           | 186           | 175           |
| Germany                                         | 423           | 467           | 484           | 557           | 555           | 546           |
| Greece                                          | 51            | 35            | 34            | 47            | 39            | 44            |
| Hong Kong                                       | 374           | 434           | 468           | 570           | 626           | 764           |
| Indonesia                                       | 293           | 296           | 400           | 499           | 700           | 835           |
| Ireland, Republic of                            | 27            | 23            | 32            | 36            | 53            | 57            |
| Italy                                           | 114           | 160           | 136           | 165           | 168           | 178           |
| Japan                                           | 2 504         | 2 896         | 3 052         | 3 260         | 3 701         | 3 924         |
| Korea, Republic of                              | 158           | 212           | 344           | 523           | 809           | 1 115         |
| Malaysia                                        | 409           | 508           | 473           | 612           | 688           | 785           |
| Netherlands                                     | 117           | 130           | 161           | 148           | 190           | 148           |
| New Zealand                                     | 1 006         | 874           | 849           | 831           | 928           | 1 071         |
| Papua New Guinea                                | 250           | 284           | 236           | 260           | 240           | 246           |
| Philippines                                     | 68            | 62            | 62            | 64            | 94            | 113           |
| Russian Federation(a)                           | 59            | 63            | 73            | 80            | 61            | 56            |
| Singapore                                       | 466           | 522           | 702           | 824           | 1 230         | 1 355         |
| South Africa                                    | 26            | 48            | 77            | 124           | 145           | 175           |
| Sweden                                          | 79            | 85            | 77            | 100           | 106           | 87            |
| Switzerland                                     | 163           | 160           | 214           | 209           | 248           | 248           |
| Taiwan                                          | 160           | 243           | 410           | 533           | 646           | 707           |
| Thailand                                        | 121           | 165           | 207           | 249           | 369           | 407           |
| United Kingdom                                  | 1 561         | 1 762         | 1 738         | 1 876         | 1 836         | 1 907         |
| United States of America                        | 2 034         | 1 898         | 2 073         | 2 470         | 2 321         | 2 837         |
| Africa n.e.s.                                   | 162           | 98            | 126           | 143           | 96            | 108           |
| America n.e.s.                                  | 35            | 46            | 71            | 109           | 140           | 161           |
| Asia n.e.s.                                     | 728           | 800           | 1 021         | 1 241         | 1 238         | 1 449         |
| Europe n.e.s.                                   | 812           | 813           | 920           | 1 261         | 1 049         | 1 189         |
| Oceania n.e.s.                                  | 279           | 284           | 268           | 322           | 256           | 274           |
| International capital markets                   | —             | —             | —             | —             | —             | —             |
| International institutions                      | —             | —             | 5             | 1             | 2             | 2             |
| Unallocated                                     | 1 011         | 1 785         | 3 138         | 2 270         | 3 316         | 2 500         |
| <b>Total all countries</b>                      | <b>14 269</b> | <b>15 891</b> | <b>18 573</b> | <b>20 315</b> | <b>22 771</b> | <b>24 257</b> |
| Country groups(b)                               |               |               |               |               |               |               |
| APEC                                            | 7 693         | 8 941         | 9 955         | 11 887        | 12 424        | 15 314        |
| ASEAN                                           | 1 731         | 1 952         | 2 292         | 2 831         | 3 502         | 4 054         |
| EU                                              | 2 614         | 2 945         | 3 014         | 3 395         | 3 514         | 3 511         |
| OECD                                            | 9 212         | 9 575         | 10 015        | 11 134        | 11 550        | 12 596        |
| OPEC                                            | 353           | 327           | 461           | 599           | 769           | 907           |

(a) The remaining republics of the former USSR have been included in either Europe n.e.s. or Asia n.e.s. from 1992-93 onwards.

(b) APEC includes Brunei, Canada, Chile, China, Peoples' Republic of, Hong Kong, Indonesia, Japan, Korea, Republic of, Malaysia, Mexico, New Zealand, Papua New Guinea, Philippines, Singapore, Taiwan, Thailand and United States of America. ASEAN includes Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand. EU includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and United Kingdom. OECD includes Andorra, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Liechtenstein, Luxembourg, Mexico, Monaco, New Zealand, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States of America. OPEC includes Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela.

Source: *Balance of Payments and International Investment Position, Australia* (5363.0).

## 30.10 SERVICES DEBITS, By Country and Country Group

|                                                 | 1990-91        | 1991-92        | 1992-93        | 1993-94        | 1994-95        | 1995-96        |
|-------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                                 | \$m            | \$m            | \$m            | \$m            | \$m            | \$m            |
| Countries                                       |                |                |                |                |                |                |
| Belgium and Luxembourg                          | -82            | -115           | -126           | -118           | -109           | -99            |
| Canada                                          | -215           | -296           | -248           | -344           | -368           | -407           |
| Central America and Caribbean, excluding Mexico | -144           | -97            | -89            | -130           | -144           | -144           |
| China, People's Republic of                     | -130           | -175           | -316           | -332           | -488           | -508           |
| Fiji                                            | -294           | -99            | -106           | -92            | -98            | -106           |
| France                                          | -242           | -248           | -228           | -263           | -277           | -273           |
| Germany                                         | -495           | -554           | -416           | -448           | -509           | -506           |
| Greece                                          | -125           | -158           | -152           | -190           | -206           | -228           |
| Hong Kong                                       | -763           | -723           | -785           | -831           | -950           | -965           |
| Indonesia                                       | -181           | -254           | -373           | -376           | -437           | -515           |
| Ireland, Republic of                            | -39            | -61            | -67            | -77            | -90            | -108           |
| Italy                                           | -288           | -357           | -280           | -283           | -309           | -346           |
| Japan                                           | -1 247         | -1 308         | -1 232         | -1 442         | -1 836         | -1 624         |
| Korea, Republic of                              | -91            | -58            | -152           | -209           | -266           | -295           |
| Malaysia                                        | -176           | -165           | -315           | -338           | -354           | -356           |
| Netherlands                                     | -259           | -307           | -426           | -434           | -492           | -305           |
| New Zealand                                     | -789           | -690           | -623           | -651           | -710           | -756           |
| Papua New Guinea                                | -155           | -99            | -100           | -141           | -113           | -137           |
| Philippines                                     | -75            | -84            | -108           | -114           | -133           | -143           |
| Russian Federation(a)                           | -132           | -107           | -227           | -218           | -138           | -110           |
| Singapore                                       | -406           | -362           | -500           | -516           | -624           | -581           |
| South Africa                                    | -31            | -30            | -33            | -54            | -84            | -104           |
| Sweden                                          | -137           | -53            | -53            | -131           | -120           | -127           |
| Switzerland                                     | -111           | -165           | -261           | -354           | -461           | -508           |
| Taiwan                                          | -86            | -126           | -165           | -187           | -200           | -209           |
| Thailand                                        | -165           | -154           | -182           | -171           | -195           | -206           |
| United Kingdom                                  | -2 606         | -2 758         | -2 976         | -3 302         | -3 527         | -3 814         |
| United States of America                        | -4 028         | -3 331         | -3 749         | -3 874         | -3 883         | -4 204         |
| Africa n.e.s.                                   | -149           | -174           | -131           | -145           | -138           | -170           |
| America n.e.s.                                  | -77            | -125           | -130           | -113           | -118           | -150           |
| Asia n.e.s.                                     | -1 234         | -1 289         | -1 528         | -1 570         | -1 917         | -1 919         |
| Europe n.e.s.                                   | -1 197         | -1 687         | -1 604         | -1 626         | -1 745         | -1 764         |
| Oceania n.e.s.                                  | -374           | -173           | -243           | -258           | -244           | -276           |
| International capital markets                   | —              | —              | —              | —              | —              | —              |
| International institutions                      | —              | -3             | -1             | -2             | -1             | -1             |
| Unallocated                                     | -808           | -2 338         | -2 355         | -2 685         | -1 779         | -2 152         |
| <b>Total all countries</b>                      | <b>-17 331</b> | <b>-18 723</b> | <b>-20 280</b> | <b>-22 019</b> | <b>-23 063</b> | <b>-24 116</b> |
| Country groups(b)                               |                |                |                |                |                |                |
| APEC                                            | -8 185         | -8 497         | -9 576         | -10 397        | -12 183        | -12 100        |
| ASEAN                                           | -1 815         | -1 790         | -2 306         | -2 369         | -2 846         | -2 989         |
| EU                                              | -4 518         | -5 027         | -5 199         | -5 655         | -6 326         | -6 411         |
| OECD                                            | -11 640        | -11 762        | -12 042        | -13 131        | -14 415        | -14 712        |
| OPEC                                            | -228           | -313           | -478           | -491           | -514           | -599           |

(a) The remaining republics of the former USSR have been included in either Europe n.e.s. or Asia n.e.s. from 1992-93 onwards.

(b) APEC includes Brunei, Canada, Chile, China, Peoples' Republic of, Hong Kong, Indonesia, Japan, Korea, Republic of, Malaysia, Mexico, New Zealand, Papua New Guinea, Philippines, Singapore, Taiwan, Thailand and United States of America. ASEAN includes Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand. EU includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and United Kingdom. OECD includes Andorra, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Liechtenstein, Luxembourg, Mexico, Monaco, New Zealand, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States of America. OPEC includes Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela.

Source: Balance of Payments and International Investment Position, Australia (5363.0).

### International investment position

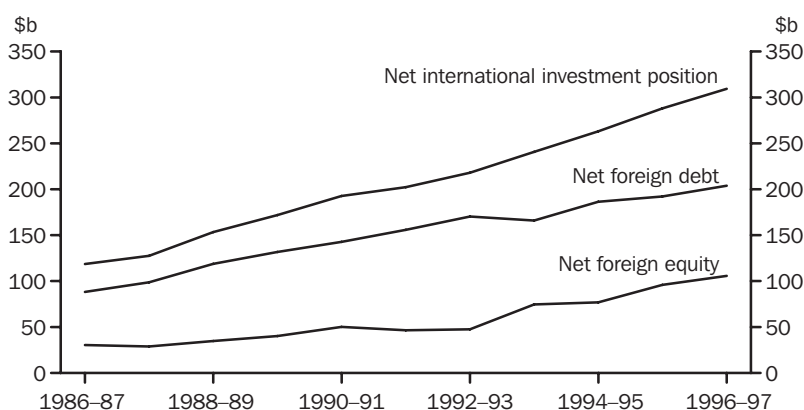
Australia's net international investment position is the difference between the levels of Australia's foreign financial liabilities and the levels of Australia's foreign financial assets. Historically, Australia has had a net liabilities position with the rest of the world.

Australia's net foreign liabilities at 30 June 1997 totalled \$309.4b, up 7% on 30 June 1996. The rise in Australia's net foreign liabilities since 30 June 1996 was the net effect of rises of \$52.5b

in the level of foreign liabilities and \$31.1b in the level of foreign financial assets. Of the rise in the level of foreign liabilities, \$26.8b was attributable to equity while \$25.7b was attributable to foreign debt, or non equity investment.

Graph 30.11 shows the components of Australia's international investment position between 1986–87 and 1996–97. It shows that the increases in net foreign liabilities reflect increases in both net foreign debt and net foreign equity in most years.

30.11 NET INTERNATIONAL INVESTMENT POSITION



Source: *Balance of Payments and International Investment Position, Australia* (5302.0).

Table 30.12 shows a reconciliation between opening and closing levels for foreign financial assets, foreign liabilities and Australia's net international investment position. Increases or

decreases in these assets and liabilities are due to capital transactions (investment flows), exchange rate changes, and other adjustments such as market price movements.

### 30.12 INTERNATIONAL INVESTMENT POSITION

|                                              | Position at<br>beginning of period | Changes in position reflecting |                          |                   | Position at end of<br>period |
|----------------------------------------------|------------------------------------|--------------------------------|--------------------------|-------------------|------------------------------|
|                                              |                                    | Transactions                   | Exchange rate<br>changes | Other adjustments |                              |
|                                              | \$m                                | \$m                            | \$m                      | \$m               | \$m                          |
| <b>FOREIGN ASSETS(a)</b>                     |                                    |                                |                          |                   |                              |
| <i>Equity</i>                                |                                    |                                |                          |                   |                              |
| 1994-95                                      | -81 911                            | -2 969                         | -4 482                   | -1 525            | -90 887                      |
| 1995-96                                      | -90 887                            | -8 087                         | 8 676                    | -4 322            | -94 620                      |
| 1996-97                                      | -94 620                            | -9 124                         | -2 418                   | -5 526            | -111 688                     |
| <i>Debt</i>                                  |                                    |                                |                          |                   |                              |
| 1994-95                                      | -65 960                            | 3 566                          | -3 143                   | -967              | -66 504                      |
| 1995-96                                      | -66 504                            | -10 388                        | 4 773                    | 1 729             | -70 390                      |
| 1996-97                                      | -70 390                            | -9 304                         | -1 893                   | -2 857            | -84 444                      |
| <i>Total</i>                                 |                                    |                                |                          |                   |                              |
| 1994-95                                      | -147 871                           | 598                            | -7 625                   | -2 493            | -157 391                     |
| 1995-96                                      | -157 391                           | -18 474                        | 13 449                   | -2 594            | -165 010                     |
| 1996-97                                      | -165 010                           | -18 428                        | -4 311                   | -8 383            | -196 132                     |
| <b>FOREIGN LIABILITIES(b)</b>                |                                    |                                |                          |                   |                              |
| <i>Equity</i>                                |                                    |                                |                          |                   |                              |
| 1994-95                                      | 156 539                            | 12 020                         | 91                       | -975              | 167 675                      |
| 1995-96                                      | 167 675                            | 18 920                         | -43                      | 3 998             | 190 550                      |
| 1996-97                                      | 190 550                            | 15 420                         | 0                        | 11 367            | 217 337                      |
| <i>Debt</i>                                  |                                    |                                |                          |                   |                              |
| 1994-95                                      | 231 924                            | 10 237                         | 6 956                    | 3 666             | 252 783                      |
| 1995-96                                      | 252 783                            | 22 035                         | -13 562                  | 1 214             | 262 470                      |
| 1996-97                                      | 262 470                            | 18 401                         | 2 940                    | 4 365             | 288 176                      |
| <i>Total</i>                                 |                                    |                                |                          |                   |                              |
| 1994-95                                      | 388 463                            | 22 255                         | 7 048                    | 2 692             | 420 458                      |
| 1995-96                                      | 420 458                            | 40 957                         | -13 604                  | 5 209             | 453 020                      |
| 1996-97                                      | 453 020                            | 33 821                         | 2 940                    | 15 732            | 505 513                      |
| <b>NET INTERNATIONAL INVESTMENT POSITION</b> |                                    |                                |                          |                   |                              |
| <i>Equity</i>                                |                                    |                                |                          |                   |                              |
| 1994-95                                      | 74 628                             | 9 051                          | -4 391                   | -2 500            | 76 788                       |
| 1995-96                                      | 76 788                             | 10 834                         | 8 634                    | -326              | 95 930                       |
| 1996-97                                      | 95 930                             | 6 297                          | -2 418                   | 5 840             | 105 649                      |
| <i>Debt</i>                                  |                                    |                                |                          |                   |                              |
| 1994-95                                      | 165 965                            | 13 802                         | 3 813                    | 2 700             | 186 280                      |
| 1995-96                                      | 186 280                            | 11 649                         | -8 789                   | 2 941             | 192 081                      |
| 1996-97                                      | 192 081                            | 9 096                          | 1 047                    | 1 508             | 203 732                      |
| <i>Total</i>                                 |                                    |                                |                          |                   |                              |
| 1994-95                                      | 240 593                            | 22 853                         | -577                     | 199               | 263 068                      |
| 1995-96                                      | 263 068                            | 22 483                         | -155                     | 2 615             | 288 011                      |
| 1996-97                                      | 288 011                            | 15 393                         | -1 372                   | 7 349             | 309 381                      |

(a) Assets include claims of Australian direct investment enterprises on direct investors which are classified as part of direct investment in Australia. (b) Liabilities include liabilities of Australian direct investors to direct investment enterprises abroad, which are classified as part of direct investment abroad.

Source: *Balance of Payments and International Investment Position, Australia* (5302.0).



## Foreign debt

Foreign debt is a subset of the financial obligations that comprise a country's international investment position. It includes all the non-equity components of the net international investment position, that is, all recorded assets and liabilities other than equity securities and direct investment equity capital, including reinvested earnings.

The level of borrowing and other non-equity liabilities by Australian residents at a particular date can be equated with Australia's foreign debt liabilities. The level of Australian lending abroad and other non-equity assets at the same date are deducted from the level of borrowing to arrive at Australia's net foreign debt.

The level of net foreign debt at 30 June 1997 was \$203.7b, up 6% on 30 June 1996. The increase during 1996–97 resulted from net capital transactions of \$9.1, exchange rate changes of \$1.0b and other adjustments of \$1.5b (table 30.12).

Net foreign debt of the public sector (official sector plus public trading and financial enterprises) fell by 5% during 1996–97, to \$64.8b at 30 June 1997, accounting for 32% of total net foreign debt at that date. Net foreign debt of the private sector increased by 12% to \$138.9b, largely as a result of an increase in net foreign debt of financial corporations (table 30.13).

## 30.13 FOREIGN DEBT LEVELS

|                                  | Value of debt outstanding at end of period |                |                |                |                |                |
|----------------------------------|--------------------------------------------|----------------|----------------|----------------|----------------|----------------|
|                                  | 1991-92                                    | 1992-93        | 1993-94        | 1994-95        | 1995-96        | 1996-97        |
|                                  | \$m                                        | \$m            | \$m            | \$m            | \$m            | \$m            |
| <b>FOREIGN ASSETS</b>            |                                            |                |                |                |                |                |
| <b>Public sector</b>             |                                            |                |                |                |                |                |
| General government               | -1 422                                     | -1 262         | -1 633         | -884           | -989           | -1 430         |
| Financial corporations           |                                            |                |                |                |                |                |
| Reserve Bank                     | -22 240                                    | -20 823        | -20 661        | -20 184        | -19 059        | -22 836        |
| Depository corporations(a)       | -4 769                                     | -4 619         | -4 440         | -2 612         | -3 543         | n.p.           |
| Other financial corporations(a)  | -4 059                                     | -4 704         | -5 008         | -6 743         | -6 355         | -5 849         |
| Non-financial corporations       | -1 623                                     | -1 478         | -1 262         | -1 148         | -681           | -1 516         |
| <i>Total public sector</i>       | -34 113                                    | -32 886        | -33 004        | -31 571        | -30 627        | -31 631        |
| <b>Private sector</b>            |                                            |                |                |                |                |                |
| Financial corporations           | -12 694                                    | -15 676        | -18 110        | -20 669        | -26 536        | -38 667        |
| Non-financial corporations       | -11 379                                    | -16 924        | -14 846        | -14 264        | -13 227        | -14 146        |
| <i>Total private sector</i>      | -24 073                                    | -32 600        | -32 956        | -34 933        | -39 763        | -52 813        |
| <b>Total foreign assets</b>      | <b>-58 186</b>                             | <b>-65 486</b> | <b>-65 960</b> | <b>-66 504</b> | <b>-70 390</b> | <b>-84 444</b> |
| <b>FOREIGN LIABILITIES</b>       |                                            |                |                |                |                |                |
| <b>Public sector</b>             |                                            |                |                |                |                |                |
| General government               |                                            |                |                |                |                |                |
| Commonwealth                     | 16 766                                     | 21 911         | 23 161         | 28 453         | 36 736         | 41 575         |
| State                            | 29 602                                     | 38 888         | 39 722         | 41 316         | 36 627         | 37 286         |
| Financial corporations           |                                            |                |                |                |                |                |
| Reserve Bank                     | 54                                         | 93             | 44             | 67             | 51             | 72             |
| Depository corporations(a)       | 18 004                                     | 20 194         | 19 152         | 7 127          | 7 270          | n.p.           |
| Other financial corporations(a)  | 4 332                                      | 4 648          | 5 167          | 9 452          | 7 816          | 7 985          |
| Non-financial corporations       | 12 833                                     | 11 970         | 10 610         | 9 750          | 5 099          | 5 995          |
| <i>Total public sector</i>       | 81 591                                     | 97 704         | 97 856         | 101 877        | 98 861         | 96 453         |
| <b>Private sector</b>            |                                            |                |                |                |                |                |
| Financial corporations           | 70 723                                     | 72 258         | 74 762         | 92 037         | 103 922        | 129 881        |
| Non-financial corporations       | 61 671                                     | 65 880         | 59 306         | 58 869         | 59 687         | 61 842         |
| <i>Total private sector</i>      | 132 394                                    | 138 138        | 134 068        | 150 906        | 163 609        | 191 723        |
| <b>Total foreign liabilities</b> | <b>213 985</b>                             | <b>235 842</b> | <b>231 924</b> | <b>252 783</b> | <b>262 470</b> | <b>288 176</b> |
| <b>NET FOREIGN DEBT</b>          |                                            |                |                |                |                |                |
| <b>Public sector</b>             |                                            |                |                |                |                |                |
| General government               | 44 946                                     | 59 537         | 61 250         | 68 885         | 72 374         | 77 431         |
| Financial corporations           |                                            |                |                |                |                |                |
| Reserve Bank                     | -22 186                                    | -20 730        | -20 617        | -20 117        | -19 008        | -22 764        |
| Depository corporations(a)       | 13 235                                     | 15 575         | 14 712         | 4 515          | 3 727          | np             |
| Other financial corporations(a)  | 273                                        | -56            | 159            | 2 709          | 1 461          | 2 136          |
| Non-financial corporations       | 11 210                                     | 10 492         | 9 348          | 8 602          | 4 418          | 4 479          |
| <i>Total public sector</i>       | 47 478                                     | 64 818         | 64 852         | 70 306         | 68 234         | 64 822         |
| <b>Private sector</b>            |                                            |                |                |                |                |                |
| Financial corporations           | 58 029                                     | 56 582         | 56 652         | 71 368         | 77 386         | 91 214         |
| Non-financial corporations       | 50 292                                     | 48 956         | 44 460         | 44 605         | 46 460         | 47 696         |
| <i>Total private sector</i>      | 108 321                                    | 105 538        | 101 112        | 115 973        | 123 846        | 138 910        |
| <b>Net foreign debt</b>          | <b>155 799</b>                             | <b>170 356</b> | <b>165 964</b> | <b>186 280</b> | <b>192 081</b> | <b>203 732</b> |

(a) For 1996-97 data for depository corporations are included with data for other financial corporations.

Source: Balance of Payments and International Investment Position, Australia (5302.0).

## Levels of Australian investment abroad and foreign investment in Australia

In table 30.14, levels of investment are categorised by direction (Australian investment abroad and foreign investment in Australia), type

(direct, portfolio, other and reserve assets) and by instrument.

Direct investment is a category of international investment that reflects the objective of obtaining a lasting interest by a resident in one economy in an enterprise in another economy, and implies a significant degree of influence by

the investor on the management of the enterprise. A direct investment relationship is established when a direct investor, who is a resident in one economy, holds 10% or more of the ordinary shares or voting stock of an enterprise (direct investment enterprise) in another economy. The portfolio investment category covers investment in equity and debt securities (other than direct investment and reserve assets).

The items Australian investment abroad and Foreign investment in Australia in table 30.14 do not equate with foreign assets and liabilities respectively in table 30.12. The difference is due to netting of assets and liabilities in regard to direct investment, both abroad and in Australia.

Claims by direct investment enterprises on their direct investors, separately identified in table 30.14, are netted off in that table against liabilities to direct investors.

Australian investment abroad totalled \$172.6b as at 30 June 1997, up 15% on 30 June 1996. This rise was the net effect of a \$2.1b increase in direct investment abroad, a \$12.7b increase in portfolio investment assets, a \$3.9b increase in other investment assets and a \$3.8b increase in reserve assets. The main contributor to the increase in Australian investment abroad was portfolio investment assets, with significant increases recorded in both equity and debt securities.

### 30.14 LEVELS OF AUSTRALIAN INVESTMENT ABROAD AND FOREIGN INVESTMENT IN AUSTRALIA

|                                               | 1991-92         | 1992-93         | 1993-94         | 1994-95         | 1995-96         | 1996-97         |
|-----------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                               | \$m             | \$m             | \$m             | \$m             | \$m             | \$m             |
| <b>AUSTRALIAN INVESTMENT ABROAD</b>           |                 |                 |                 |                 |                 |                 |
| <b>Direct investment abroad(a)</b>            |                 |                 |                 |                 |                 |                 |
| Equity capital and reinvested earnings        | -44 498         | -49 607         | -49 917         | -56 157         | -56 931         | -66 568         |
| Other capital                                 |                 |                 |                 |                 |                 |                 |
| Claims on affiliated enterprises              | -9 483          | -10 610         | -8 493          | -7 683          | -8 741          | -8 742          |
| Liabilities to affiliated enterprises         | 9 288           | 12 218          | 9 351           | 9 952           | 7 970           | 15 490          |
| <i>Total direct investment abroad</i>         | -44 693         | -47 999         | -49 059         | -53 888         | -57 702         | -59 820         |
| <b>Portfolio investment assets</b>            |                 |                 |                 |                 |                 |                 |
| Equity securities                             | -21 435         | -27 191         | -31 993         | -34 730         | -37 690         | -45 114         |
| Debt securities                               | -8 000          | -13 200         | -9 700          | -9 400          | -8 600          | -13 921         |
| <i>Total portfolio investment assets</i>      | -29 435         | -40 391         | -41 693         | -44 130         | -46 290         | -59 035         |
| <b>Other investment assets</b>                |                 |                 |                 |                 |                 |                 |
| Trade credits                                 | -5 194          | -5 644          | -7 195          | -6 270          | -6 578          | -8 065          |
| Loans and other assets                        | -7 777          | -9 364          | -13 619         | -15 055         | -20 451         | -22 819         |
| <i>Total other investment assets</i>          | -12 971         | -15 008         | -20 814         | -21 325         | -27 029         | -30 884         |
| Reserve assets                                | -22 240         | -20 823         | -20 661         | -20 185         | -19 059         | -22 836         |
| <b>Total Australian investment abroad</b>     | <b>-109 339</b> | <b>-124 221</b> | <b>-132 227</b> | <b>-139 528</b> | <b>-150 080</b> | <b>-172 575</b> |
| <b>FOREIGN INVESTMENT IN AUSTRALIA</b>        |                 |                 |                 |                 |                 |                 |
| <b>Direct investment in Australia(b)</b>      |                 |                 |                 |                 |                 |                 |
| Equity capital and reinvested earnings        | 82 800          | 89 019          | 98 651          | 103 544         | 116 984         | 126 200         |
| Other capital                                 |                 |                 |                 |                 |                 |                 |
| Claims on direct investors                    | -5 493          | -5 845          | -6 294          | -7 912          | -6 961          | -8 066          |
| Liabilities to direct investors               | 30 425          | 31 122          | 31 246          | 34 316          | 36 468          | 38 863          |
| <i>Total direct investment in Australia</i>   | <i>107 732</i>  | <i>114 296</i>  | <i>123 603</i>  | <i>129 948</i>  | <i>146 491</i>  | <i>156 997</i>  |
| <b>Portfolio investment liabilities</b>       |                 |                 |                 |                 |                 |                 |
| Equity securities                             | 29 582          | 35 308          | 57 888          | 64 131          | 73 566          | 91 137          |
| Debt securities                               | 25 977          | 25 824          | 26 494          | 31 720          | 40 615          | 44 746          |
| <i>Total portfolio investment liabilities</i> | <i>55 559</i>   | <i>61 132</i>   | <i>84 382</i>   | <i>95 851</i>   | <i>114 181</i>  | <i>135 883</i>  |
| <b>Other investment liabilities</b>           |                 |                 |                 |                 |                 |                 |
| Trade credits                                 | 3 719           | 3 658           | 5 689           | 6 400           | 6 898           | 6 292           |
| Loans                                         | 137 630         | 156 070         | 150 418         | 161 109         | 160 377         | 164 306         |
| Currency and deposits                         | 6 758           | 6 707           | 8 363           | 8 710           | 9 669           | 18 605          |
| Other liabilities                             | 188             | 244             | 363             | 578             | 475             | -126            |
| <i>Total other investment liabilities</i>     | <i>148 295</i>  | <i>166 679</i>  | <i>164 833</i>  | <i>176 797</i>  | <i>177 419</i>  | <i>189 077</i>  |
| <b>Total foreign investment in Australia</b>  | <b>311 586</b>  | <b>342 106</b>  | <b>372 818</b>  | <b>402 596</b>  | <b>438 091</b>  | <b>481 957</b>  |

(a) Net direct investment abroad, after deduction of liabilities to direct investment enterprises abroad. (b) Net direct investment in Australia, after deduction of claims of Australian direct investment enterprises on direct investors.

Source: *Balance of Payments and International Investment Position, Australia* (5302.0).

Foreign investment in Australia totalled \$482.0b as at 30 June 1997, up 10% on June 1996. The rise in foreign investment in Australia since 30 June 1996 was due to a \$10.5b increase in direct investment in Australia, a \$21.7b increase in portfolio investment liabilities, and an \$11.7b increase in other investment liabilities. As with Australian investment abroad, the main contributor to the increase in foreign investment in Australia was portfolio investment liabilities, of which equity securities recorded the largest increase.

## Ratios

Table 30.15 and graph 30.16 show that the ratio of the balance on current account to GDP was 3.4% in 1996–97, a decrease of one percentage point over the previous year, and the lowest it has been in the last six years.

Graph 30.17 shows that the ratio of Australia's net foreign liabilities (Australia's net international investment position) to GDP has been rising since 1991–92 and reached its highest level of about 61% at 30 June 1997. The ratio of net foreign debt to GDP was 40% at 30 June 1997, little changed on the results for recent years. However, the ratio of net foreign equity to GDP was 20.7%, nearly double the level of four years earlier.

Table 30.15 shows that the net investment income payable on net foreign debt as a percentage of exports of goods and services was 10.6% in 1996–97, the lowest ratio in 15 years. The ratio of net investment income payable on equity to exports of goods and services was 7.8% in 1996–97, down on the results of the previous two years but well above the ratios achieved in the decade to 1993–94.

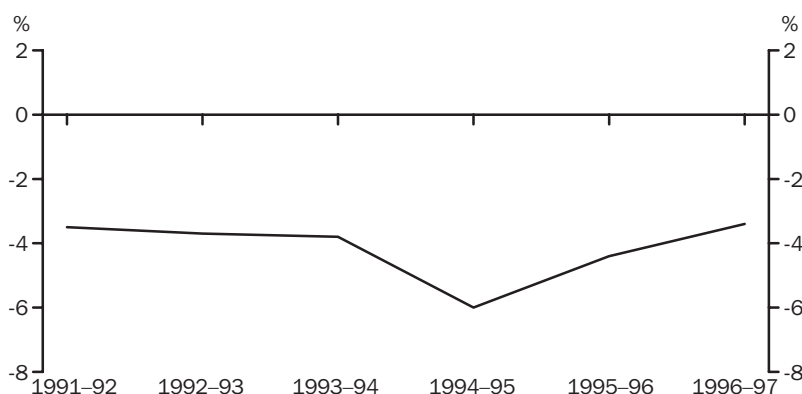
**30.15 RATIOS**

| Current transactions                         | 1991–92 | 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|----------------------------------------------|---------|---------|---------|---------|---------|---------|
| \$ MILLION                                   |         |         |         |         |         |         |
| GDP(a)                                       | 387 529 | 405 375 | 429 680 | 457 294 | 487 625 | 509 772 |
| RATIOS TO GDP (%) (b)                        |         |         |         |         |         |         |
| Balance on current account                   | -3.5    | -3.7    | -3.8    | -6.0    | -4.4    | -3.4    |
| Goods and services                           |         |         |         |         |         |         |
| Credits                                      | 18.0    | 18.9    | 19.3    | 19.1    | 20.2    | 20.6    |
| Debits                                       | -17.8   | -19.4   | -19.8   | -21.3   | -20.6   | -20.3   |
| Net income                                   | -3.7    | -3.1    | -3.2    | -3.8    | -3.9    | -3.8    |
| Net international investment position        |         |         |         |         |         |         |
| Net foreign equity                           | 12.0    | 11.7    | 17.4    | 16.8    | 19.7    | 20.7    |
| Net foreign debt                             | 40.2    | 42.0    | 38.6    | 40.7    | 39.4    | 40.0    |
| RATIOS TO GOODS AND SERVICES CREDITS (%) (c) |         |         |         |         |         |         |
| Net investment income                        |         |         |         |         |         |         |
| Net foreign equity                           | 5.0     | 4.6     | 5.7     | 8.6     | 8.5     | 7.8     |
| Net foreign debt                             | 15.7    | 12.1    | 11.2    | 11.2    | 11.2    | 10.6    |

(a) GDP(l) at current prices, Australian National Accounts: National Income, Expenditure and Product (5206.0). (b) These ratios are derived by expressing net foreign liabilities at end of year as a percentage of GDP(l) at current prices for that year. (c) This series carries the opposite sign to the corresponding series in other tables of this chapter.

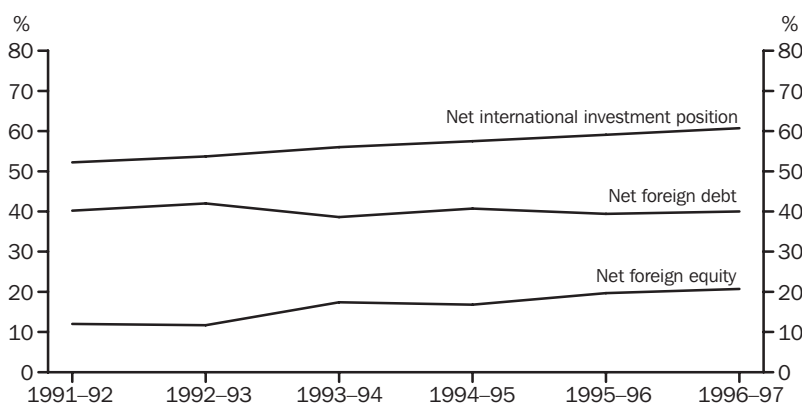
Source: *Balance of Payments and International Investment Position, Australia* (5302.0).

30.16 RATIO OF BALANCE ON CURRENT ACCOUNT TO GDP



Source: Balance of Payments and International Investment Position, Australia (5302.0);  
Australian National Accounts: National Income, Expenditure and Product (5206.0).

30.17 RATIOS OF NET INTERNATIONAL INVESTMENT POSITION TO GDP



Source: Balance of Payments and International Investment Position, Australia (5302.0);  
Australian National Accounts: National Income, Expenditure and Product (5206.0)

## Foreign ownership in Australia

Table 30.18 contains estimates of foreign ownership of Australian equity.

Of the total equity on issue by Australian enterprise groups at 30 June 1997, non-residents held equity valued at \$217.4b (29%) and residents held \$523b (71%).

The proportion of equity held by non-residents in private corporate trading enterprises increased steadily from 40% at 30 June 1992 to 44% at 30 June 1995. It remained at 44% at 30 June 1996 and has fallen slightly to 43% at 30 June 1997.

The value of non-residents' equity in banks rose as a proportion of the total equity issued by banks, from 21% at June 1992 to 23% at 30 June 1994. This proportion remained stable for the following two years, before returning to the June 1992 level at 30 June 1997.

Non-resident equity holdings in non-bank deposit-taking institutions rose steadily as a proportion of the amount on issue, from 23% at 30 June 1992 to 28% at 30 June 1994. The percentage of foreign ownership declined slightly over the following two years to 25% at 30 June 1996. However, a significant increase in the amount of equity held by non-residents

resulted in the ownership proportion increasing to 33% at 30 June 1997.

The other financial institutions sector is largely composed of general insurers. Foreign ownership of equity in these institutions declined from 15% at 30 June 1992 to 11% at 30 June 1994, stayed at this level until 30 June 1995, and returned to 15% at 30 June 1996. The foreign ownership proportion then fell to 10% as at 30 June 1997, the lowest level recorded over the six years.

It should be noted that data problems may impact on the accuracy of the analysis. The estimated market value of equity, as shown in table 30.18, is considered to be of poor quality for some sectors. In particular, estimates of the market value of the amount issued by private corporate trading enterprises are considered

poor because they are largely built up from counterpart and other information obtained from ABS Surveys of International Investment and Financial Information. This sector covers equity issued by both listed and unlisted private corporate trading enterprises, of which there are over half a million.

These problems aside, it should also be noted that it is possible to supplement the information on foreign ownership derived from the financial accounts by making use of the comprehensive information about the rest of the world sector from the international investment database. This is described in the article *Foreign Ownership of Equity in Australian Enterprise Groups* published in the March quarter 1997 issue of *International Investment Position, Australia* (5306.0). The article includes a regional analysis and an analysis by degree of foreign influence.

### 30.18 FOREIGN OWNERSHIP OF EQUITY(a)

|                                       | Unit | Value of equity outstanding at end of period |         |         |         |         |         |
|---------------------------------------|------|----------------------------------------------|---------|---------|---------|---------|---------|
|                                       |      | 1991-92                                      | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
| <b>All sectors</b>                    |      |                                              |         |         |         |         |         |
| Amount issued                         | \$b  | 435.3                                        | 482.6   | 560.7   | 587.4   | 638.3   | 740.4   |
| Amount held by rest of the world      | \$b  | 110.8                                        | 122.6   | 156.0   | 167.6   | 190.5   | 217.4   |
| Percentage of foreign ownership       | %    | 25                                           | 25      | 28      | 29      | 30      | 29      |
| <b>Selected sub-sectors(b)</b>        |      |                                              |         |         |         |         |         |
| Private corporate trading enterprises |      |                                              |         |         |         |         |         |
| Amount issued(c)                      | \$b  | 235.7                                        | 259.8   | 321.5   | 330.5   | 372.5   | 427.1   |
| Amount held by rest of the world      | \$b  | 95.3                                         | 104.9   | 135.0   | 145.5   | 163.8   | 183.4   |
| Percentage foreign ownership          | %    | 40                                           | 40      | 42      | 44      | 44      | 43      |
| Banks                                 |      |                                              |         |         |         |         |         |
| Amount issued(c)                      | \$b  | 35.7                                         | 43.3    | 47.8    | 53.0    | 61.0    | 90.6    |
| Amount held by rest of the world      | \$b  | 7.6                                          | 8.9     | 11.2    | 12.0    | 13.9    | 18.8    |
| Percentage foreign ownership          | %    | 21                                           | 21      | 23      | 23      | 23      | 21      |
| Non-bank deposit taking institutions  |      |                                              |         |         |         |         |         |
| Amount issued(c)                      | \$b  | 12.1                                         | 14.2    | 13.8    | 15.4    | 15.9    | 16.0    |
| Amount held by rest of the world      | \$b  | 2.8                                          | 3.4     | 3.8     | 4.2     | 4.0     | 5.2     |
| Percentage foreign ownership          | %    | 23                                           | 24      | 28      | 27      | 25      | 33      |
| Other financial institutions(d)       |      |                                              |         |         |         |         |         |
| Amount issued(c)                      | \$b  | 23.4                                         | 28.6    | 37.7    | 37.3    | 42.5    | 60.9    |
| Amount held by rest of the world      | \$b  | 3.6                                          | 3.6     | 4.0     | 4.2     | 6.2     | 6.0     |
| Percentage foreign ownership          | %    | 15                                           | 13      | 11      | 11      | 15      | 10      |

(a) Equity includes units in trusts. (b) Not all sub-sectors have been shown. In particular, data for life offices and superannuation funds are not shown due to unresolved measurement and conceptual issues. Data for general government, Reserve Bank and public trading enterprises are also not shown as there is no foreign ownership in these sub-sectors. (c) These estimated market values are considered to be of poor quality. They should be used cautiously. (d) Excludes life offices and superannuation funds. See footnote (b).

Source: Australian National Accounts: Financial Accounts, June Quarter 1997 (5232.0).

## International merchandise trade

### Conceptual framework

Australia's international merchandise trade statistics, relating to the exports and imports of goods, are compiled in broad agreement with the United Nations' recommendations for the compilation of international trade statistics.

Merchandise trade covers all movable goods which add to (imports) or subtract from (exports) Australia's stock of material resources.

Excluded are:

- direct transit trade, that is, goods being transhipped or moved through Australia for purposes of transport only;
- ships and aircraft moving through Australia while engaged in the transport of passengers or goods between Australia and other countries; and
- non-merchandise trade, consisting primarily of goods moving on a temporary basis (e.g. mobile equipment, goods under repair and goods for exhibition) and passengers' effects.

International merchandise trade statistics are compiled by the Australian Bureau of Statistics from information submitted by exporters and importers or their agents to the Australian Customs Service.

The United Nations' recommendations for the compilation of merchandise trade statistics recognise that the basic sources used by most compiling countries — customs records — will not be able to capture certain transactions. In Australia the following types of goods, which fall within the scope of merchandise trade, are excluded because customs entries are not required:

- certain materials under intergovernmental agreements for defence and similar projects;
- migrants' and passengers' effects exported or imported and parcel post exports and imports of small value; and
- the sale or delivery of certain ships intended for use on overseas routes.

For exports only, types of goods excluded are:

- fish and other sea products landed abroad directly from the high seas by Australian ships; and
- export consignments where the value of the goods in each transaction is less than \$500.

For imports only, types of goods excluded are:

- bunkers, aviation fuel and stores supplied abroad to Australian ships and aircraft; and
- entries lodged on informal clearance documents (ICDs) for values not exceeding \$250, and ICDs for postal articles valued at up to \$1,000.

### Classification

In addition to the primary classification between exports and imports, international merchandise trade is also classified by commodity, by country of origin/destination, by Australian State of production/destination, and by industry of origin.

Export and import commodity statistics are available classified according to:

- the *Harmonized System*, a World Customs Organization classification which groups goods according to their component materials, from raw materials through to processed and manufactured products;
- the codes and descriptions of the third revision of the United Nations *Standard International Trade Classification, Revision 3* (SITC Rev. 3). This classification groups commodities according to the degree of processing they have undergone, from food and crude raw materials through to highly transformed manufactures; and
- the 19 categories of the United Nations *Classification by Broad Economic Categories* (BEC). The BEC classifies international trade statistics for the purposes of general economic analysis according to the main end use of the commodities traded.

Commodity export and import statistics in this section are presented according to SITC Rev. 3.

### Valuation

For exports, the point of valuation adopted is free-on-board (f.o.b.) at the Australian port of shipment, while the basis of valuation is 'transactions value', the actual price at which the goods are sold.

For imports, the point of valuation is the point of containerisation (in most cases), or f.o.b. at the customs frontier of the exporting country or the port of loading, whichever comes first. The basis of valuation is the customs value. For transactions between independent buyers and sellers, this will generally be the price actually payable. Where traders are not independent, that is, they may be related or affiliated in some way, an appropriate customs value may be determined.

Total merchandise exports and imports

In 1996–97 Australian merchandise exports rose 4% to \$78,885m and Australian merchandise imports rose 2% to \$78,977m. Imports exceeded exports by \$92m, a decrease of \$1,695m on the \$1,787m deficit recorded in 1995–96 (table 30.19 and graph 30.20).

30.19 TOTAL MERCHANDISE EXPORTS AND IMPORTS

| Financial year | Exports | Imports | Excess of exports or imports(a) |
|----------------|---------|---------|---------------------------------|
|                | \$m     | \$m     | \$m                             |
| 1991–92        | 55 027  | 50 984  | 4 043                           |
| 1992–93        | 60 702  | 59 575  | 1 127                           |
| 1993–94        | 64 548  | 64 470  | 78                              |
| 1994–95        | 67 052  | 74 619  | -7 567                          |
| 1995–96        | 76 004  | 77 792  | -1 787                          |
| 1996–97        | 78 885  | 78 977  | -92                             |

(a) A negative sign indicates that imports exceed exports.  
Source: International Trade database, June 1997.

Merchandise exports and imports by State/Territory

Table 30.21 classifies merchandise trade by Australian State or Territory.

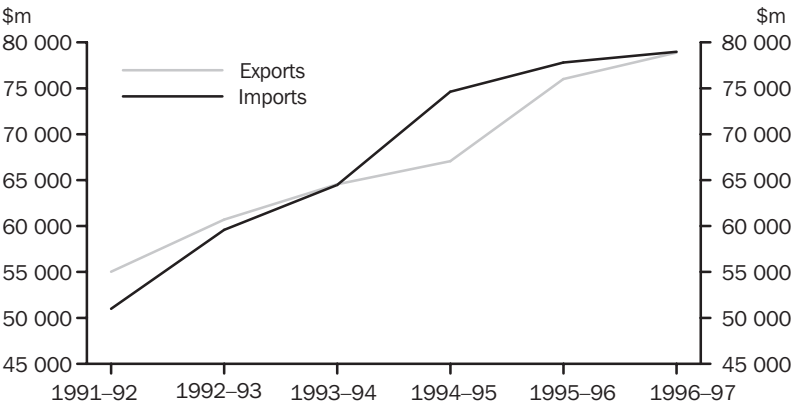
For exports, State/Territory refers to the State of origin of the goods, that is the place where the final stage of production or manufacturing occurs. The State of origin is not necessarily the State in which the goods were loaded for export.

For imports, State/Territory refers to the State of final destination, that is the place where imported goods were released from Customs control. The State of final destination is not necessarily the State in which the goods were discharged, nor is it necessarily the State in which they are used.

Re-exports are defined as goods, materials or articles originally imported into Australia which are exported in the same condition, or after undergoing minor operations (e.g. blending, packaging, bottling, cleaning, husking or shelling) which leave them essentially unchanged.

Whereas New South Wales was the State of final destination for the highest proportion of imports for each of the last three financial years, Western Australia has been the State of origin of the highest proportion of Australia's exports over this period, largely due to the importance of minerals exports.

30.20 TOTAL MERCHANDISE EXPORTS AND IMPORTS



Source: International Trade database, June 1997.



## 30.21 MERCHANDISE EXPORTS AND IMPORTS, By State/Territory

|                              | Exports       |               |               | Imports       |               |               |
|------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                              | 1994-95       | 1995-96       | 1996-97       | 1994-95       | 1995-96       | 1996-97       |
|                              | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           |
| State/Territory              |               |               |               |               |               |               |
| New South Wales              | 15 201        | 16 684        | 17 674        | 33 297        | 34 917        | 34 223        |
| Victoria                     | 13 008        | 15 410        | 16 288        | 23 967        | 24 663        | 25 193        |
| Queensland                   | 12 510        | 13 624        | 13 554        | 7 771         | 8 052         | 8 599         |
| South Australia              | 3 829         | 4 499         | 5 009         | 3 100         | 3 114         | 3 415         |
| Western Australia            | 16 435        | 18 844        | 19 324        | 5 799         | 6 290         | 6 754         |
| Tasmania                     | 1 612         | 1 620         | 1 705         | 341           | 351           | 396           |
| Northern Territory           | 1 075         | 1 210         | 1 243         | 332           | 395           | 385           |
| Australian Capital Territory | 18            | 16            | 9             | 12            | 10            | 12            |
| State not available(a)       | 285           | 290           | 390           | 0             | 0             | 0             |
| Total                        | 63 973        | 72 197        | 75 196        | 74 619        | 77 792        | 78 977        |
| Re-exports                   | 3 079         | 3 808         | 3 688         | —             | —             | —             |
| <b>Total</b>                 | <b>67 052</b> | <b>76 004</b> | <b>78 885</b> | <b>74 619</b> | <b>77 792</b> | <b>78 977</b> |

(a) Includes commodities for which State/Territory is confidential.

Source: *International Trade database*, June 1997.

## Merchandise exports and imports by country

For the purposes of international merchandise trade statistics, a country is defined as a geographical entity which trades, or has the potential to trade, with Australia in accordance with Australian Customs Service provisions. In Australian merchandise trade statistics, external territories under Australian administration are treated as separate countries while self-governing territories and dependent territories under the administration of other countries may be treated as individual countries.

For exports, country refers to the country to which the goods were consigned at the time of export. For imports, country refers to the country of origin of the goods, which is defined as the country of production for Customs purposes. Where the country of consignment/origin is not known at the time of export/import, goods are recorded as Destination unknown (exports) or Origin unknown (imports).

Graphs 30.22 and 30.23 show respectively Australia's merchandise exports to and imports from selected countries and country groups in 1996-97. They show the importance of trade with the APEC group of countries. Table 30.24 shows merchandise trade for the last three financial years, classified by country and the two country groups ASEAN and the European Union.

The main contributors to the \$1,695m decrease in the merchandise trade deficit for 1996-97 were:

- a \$286m (7%) rise in the surplus with the Republic of Korea as a result of a rise in exports of \$514m (mainly non-monetary gold and petroleum) partly offset by a rise in imports of \$228m (mainly road vehicles);
- a \$794m (6%) fall in the deficit with the United States as a result of an increase in exports of \$898m (mainly road vehicles and petroleum) partly offset by a rise in imports of \$104m (mainly machinery for particular industries, inorganic chemicals, and road vehicles); and
- a \$473m (23%) rise in the surplus with New Zealand as a result of a rise in exports of \$568m (including petroleum and transport equipment) partly offset by a rise in imports of \$95m (chiefly petroleum and related products).

These contributions to the decrease in the overall merchandise trade deficit were partly offset by:

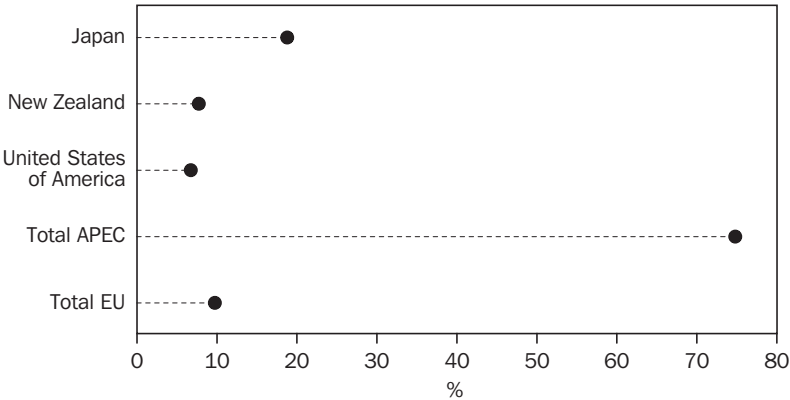
- a \$775m (38%) rise in the deficit with the United Kingdom as a result of a fall in exports of \$475m (primarily non-monetary gold and confidential items of trade) and an increase in imports of \$300m (mainly road vehicles, power generating machinery, and medicinal and pharmaceutical products);

- a \$395m (172%) rise in the deficit with China as a result of a decrease in exports of \$200m (primarily confidential items of trade) and an increase in imports of \$195m (numerous small increases); and
- a \$482m (9%) fall in the surplus with Japan as a result in of a decrease in exports of \$1,056m (mainly non-monetary gold, meat and meat

preparations, and non-ferrous metals) partly offset by a decrease in imports of \$574m (including iron and steel, and general industrial machinery).

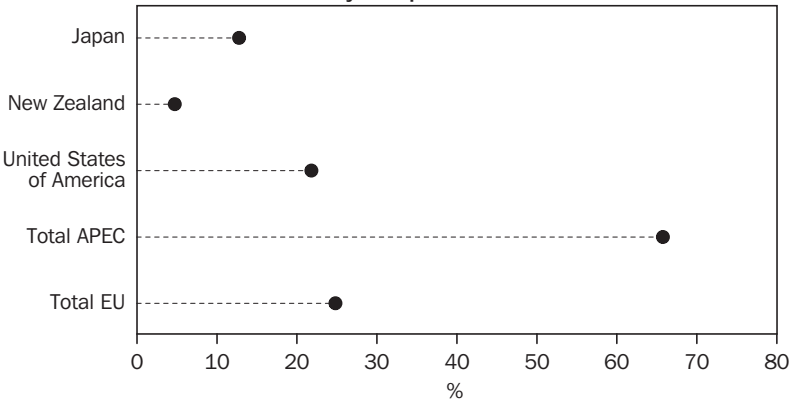
Maps 30.25, 30.26 and 30.27 show the main destination and source countries of Australia's exports and imports.

**30.22 AUSTRALIAN MERCHANDISE EXPORTS, Selected Countries and Country Groups — 1996-97**



*Note: Japan, New Zealand and the USA are part of the APEC country grouping.  
Source: International Trade database, June 1997.*

**30.23 AUSTRALIAN MERCHANDISE IMPORTS, Selected Countries and Country Groups — 1996-97**



*Note: Japan, New Zealand and the USA are part of the APEC country grouping.  
Source: International Trade database, June 1997.*

## 30.24 MERCHANDISE EXPORTS AND IMPORTS, By Country

|                                           | 1994-95 |         | 1995-96 |         | 1996-97 |         |
|-------------------------------------------|---------|---------|---------|---------|---------|---------|
|                                           | Exports | Imports | Exports | Imports | Exports | Imports |
|                                           | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     |
| Asia Pacific Economic Co-operation (APEC) |         |         |         |         |         |         |
| Brunei                                    | 55      | 22      | 77      | 0       | 59      | 0       |
| Canada                                    | 1 150   | 1 278   | 1 267   | 1 557   | 1 177   | 1 265   |
| Chile                                     | 141     | 48      | 156     | 122     | 175     | 89      |
| China, Peoples' Republic of               | 2 964   | 3 649   | 3 781   | 4 010   | 3 581   | 4 205   |
| Hong Kong                                 | 2 632   | 923     | 3 076   | 970     | 3 096   | 900     |
| Indonesia                                 | 2 113   | 1 198   | 2 784   | 1 522   | 3 308   | 1 858   |
| Japan                                     | 16 282  | 12 777  | 16 429  | 10 816  | 15 373  | 10 242  |
| Korea, Republic of                        | 5 250   | 2 028   | 6 615   | 2 293   | 7 129   | 2 521   |
| Malaysia                                  | 2 033   | 1 421   | 2 289   | 1 636   | 2 325   | 1 892   |
| Mexico                                    | 132     | 136     | 99      | 169     | 122     | 176     |
| New Zealand                               | 4 791   | 3 554   | 5 609   | 3 591   | 6 177   | 3 686   |
| Papua New Guinea                          | 933     | 1 125   | 1 048   | 1 220   | 1 270   | 1 082   |
| Philippines                               | 839     | 259     | 1 075   | 260     | 1 224   | 282     |
| Singapore                                 | 3 643   | 2 246   | 3 556   | 2 613   | 3 396   | 2 620   |
| Taiwan                                    | 3 102   | 2 570   | 3 452   | 2 585   | 3 620   | 2 522   |
| Thailand                                  | 1 560   | 970     | 1 779   | 1 005   | 1 690   | 1 201   |
| United States of America                  | 4 643   | 16 044  | 4 619   | 17 545  | 5 517   | 17 649  |
| Total                                     | 52 263  | 50 248  | 57 711  | 51 914  | 59 239  | 52 190  |
| European Union (EU)                       |         |         |         |         |         |         |
| Austria                                   | 32      | 279     | 36      | 313     | 21      | 423     |
| Belgium-Luxembourg                        | 466     | 686     | 668     | 755     | 923     | 760     |
| Denmark                                   | 100     | 340     | 117     | 336     | 100     | 382     |
| Finland                                   | 247     | 635     | 335     | 684     | 302     | 605     |
| France                                    | 794     | 1 754   | 727     | 1 867   | 799     | 1 980   |
| Germany                                   | 1 083   | 4 861   | 1 152   | 4 862   | 1 057   | 4 558   |
| Greece                                    | 20      | 63      | 34      | 78      | 39      | 95      |
| Ireland                                   | 42      | 432     | 50      | 448     | 53      | 499     |
| Italy                                     | 1 250   | 2 026   | 1 282   | 2 231   | 1 351   | 2 306   |
| Netherlands                               | 707     | 712     | 695     | 702     | 584     | 818     |
| Portugal                                  | 50      | 81      | 48      | 94      | 32      | 106     |
| Spain                                     | 277     | 484     | 292     | 519     | 328     | 458     |
| Sweden                                    | 155     | 1 426   | 200     | 1 617   | 220     | 1 497   |
| United Kingdom                            | 2 275   | 4 439   | 2 829   | 4 882   | 2 354   | 5 182   |
| Total                                     | 7 498   | 18 218  | 8 465   | 19 388  | 8 163   | 19 669  |
| Other Countries                           |         |         |         |         |         |         |
| Algeria                                   | 26      | 0       | 11      | 0       | 23      | —       |
| Angola                                    | 1       | 0       | 9       | 0       | 3       | 0       |
| Argentina                                 | 114     | 69      | 110     | 72      | 116     | 101     |
| Australian Antarctic Territory            | 1       | —       | 2       | 0       | 2       | 0       |
| Australia (Re-imports)                    | —       | 67      | —       | 94      | —       | 225     |
| Bahamas                                   | 1       | 4       | 1       | 3       | 1       | 1       |
| Bahrain(a)                                | 32      | 5       | 47      | 10      | 80      | 23      |
| Bangladesh                                | 92      | 21      | 172     | 28      | 263     | 39      |
| Barbados                                  | 2       | 0       | 2       | 1       | 3       | 1       |
| Bhutan                                    | 0       | 0       | 0       | —       | 1       | 0       |
| Bolivia                                   | 1       | 1       | 1       | 1       | 2       | 6       |
| Brazil                                    | 307     | 452     | 389     | 447     | 333     | 351     |
| Bulgaria                                  | 26      | 5       | 49      | 6       | 20      | 7       |
| Cambodia                                  | 19      | 0       | 22      | 1       | 16      | 2       |
| Cayman Islands                            | 0       | 13      | 0       | 13      | 0       | 13      |
| Christmas Island                          | 27      | 1       | 22      | 2       | 17      | 4       |
| Cocos (Keeling) Island                    | 5       | 1       | 6       | 0       | 2       | 2       |
| Colombia                                  | 26      | 14      | 37      | 17      | 58      | 21      |
| Congo                                     | 0       | 0       | 0       | 0       | 1       | 58      |
| Cook Islands                              | 4       | 0       | 12      | 2       | 4       | 1       |
| Costa Rica                                | 0       | 6       | 1       | 6       | 2       | 7       |

For footnotes see end of table.

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30.24 MERCHANDISE EXPORTS AND IMPORTS, By Country — *continued*

|                                       | 1994-95 |         | 1995-96 |         | 1996-97 |         |
|---------------------------------------|---------|---------|---------|---------|---------|---------|
|                                       | Exports | Imports | Exports | Imports | Exports | Imports |
|                                       | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     |
| Other Countries — (continued)         |         |         |         |         |         |         |
| Cote d'Ivoire                         | 3       | 5       | 0       | 6       | 1       | 5       |
| Croatia                               | 4       | 9       | 12      | 8       | 6       | 7       |
| Cuba                                  | 0       | 7       | 5       | 2       | 2       | 4       |
| Cyprus                                | 5       | 2       | 10      | 2       | 12      | 2       |
| Czech Republic                        | 21      | 56      | 24      | 47      | 30      | 52      |
| Dominican Republic                    | 0       | 1       | 0       | 1       | 1       | 1       |
| Ecuador                               | 14      | 3       | 15      | 2       | 21      | 2       |
| Egypt(a)                              | 161     | 8       | 343     | 9       | 519     | 11      |
| Ethiopia                              | 6       | 1       | 11      | 1       | 2       | 2       |
| Fiji                                  | 378     | 185     | 479     | 235     | 519     | 264     |
| Former Yugoslav Republic of Macedonia | 1       | 3       | 3       | 2       | 1       | 2       |
| French Polynesia                      | 83      | 1       | 82      | 2       | 72      | 6       |
| Georgia                               | 1       | 0       | 2       | 0       | 1       | 0       |
| Ghana                                 | 34      | 3       | 27      | 4       | 59      | 7       |
| Guam                                  | 19      | 0       | 15      | 0       | 18      | 0       |
| Guatemala                             | 2       | 2       | 1       | 3       | 1       | 3       |
| Honduras                              | 0       | 2       | 0       | 1       | 0       | 1       |
| Hungary                               | 5       | 38      | 5       | 31      | 4       | 35      |
| Iceland(a)                            | 1       | 2       | 2       | 2       | 4       | 7       |
| India                                 | 979     | 532     | 1 185   | 549     | 1 491   | 577     |
| Iran                                  | 237     | 21      | 541     | 22      | 925     | 26      |
| Iraq                                  | 0       | 0       | 14      | 0       | 142     | 0       |
| Israel                                | 83      | 273     | 102     | 300     | 104     | 290     |
| Jamaica                               | 5       | 1       | 3       | 1       | 9       | 1       |
| Jordan                                | 53      | 14      | 121     | 16      | 74      | 29      |
| Kazakhstan                            | 4       | 0       | 16      | 2       | 1       | 0       |
| Kenya                                 | 15      | 11      | 29      | 14      | 53      | 13      |
| Kiribati                              | 19      | 0       | 20      | 0       | 23      | 1       |
| Kuwait                                | 75      | 93      | 148     | 95      | 160     | 120     |
| Latvia                                | 3       | 1       | 24      | 1       | 3       | 1       |
| Laos                                  | 35      | 0       | 15      | 0       | 8       | 0       |
| Lebanon                               | 8       | 4       | 16      | 5       | 30      | 5       |
| Libya                                 | 10      | —       | 9       | 0       | 41      | 0       |
| Lithuania                             | 3       | 0       | 4       | 0       | 7       | 1       |
| Macau                                 | 5       | 11      | 9       | 10      | 13      | 6       |
| Madagascar                            | 1       | 1       | 3       | 1       | 4       | 1       |
| Malawi                                | 0       | 8       | 0       | 9       | 2       | 5       |
| Maldives                              | 2       | 0       | 4       | 0       | 3       | 0       |
| Mali                                  | 1       | 0       | 1       | 0       | 2       | 0       |
| Malta                                 | 9       | 5       | 8       | 6       | 9       | 6       |
| Marianas, Northern                    | 2       | 0       | 2       | 0       | 3       | 0       |
| Marshall Islands                      | 3       | 0       | 5       | 0       | 3       | 0       |
| Mauritius                             | 75      | 2       | 87      | 2       | 96      | 2       |
| Micronesia, Federated States of       | 9       | 0       | 10      | 0       | 9       | 0       |
| Morocco                               | 3       | 15      | 4       | 15      | 49      | 12      |
| Mozambique                            | 9       | 0       | 7       | 0       | 15      | 0       |
| Myanmar                               | 11      | 8       | 13      | 7       | 15      | 9       |
| Namibia                               | 1       | 3       | 2       | 4       | 2       | 8       |
| Nauru                                 | 28      | 12      | 25      | 14      | 21      | 11      |
| Nepal                                 | 4       | 1       | 6       | 1       | 7       | 2       |
| Netherlands Antilles                  | 3       | 3       | 3       | 3       | 3       | 1       |
| New Caledonia                         | 168     | 46      | 191     | 46      | 219     | 43      |
| Nigeria                               | 6       | 0       | 9       | 58      | 13      | 58      |
| Niue                                  | 0       | 0       | 1       | —       | 2       | 0       |
| Norfolk Island                        | 8       | 0       | 12      | 0       | 21      | —       |
| Norway                                | 68      | 168     | 101     | 137     | 142     | 180     |
| Oman                                  | 81      | 3       | 112     | 4       | 123     | 64      |

For footnotes see end of table.

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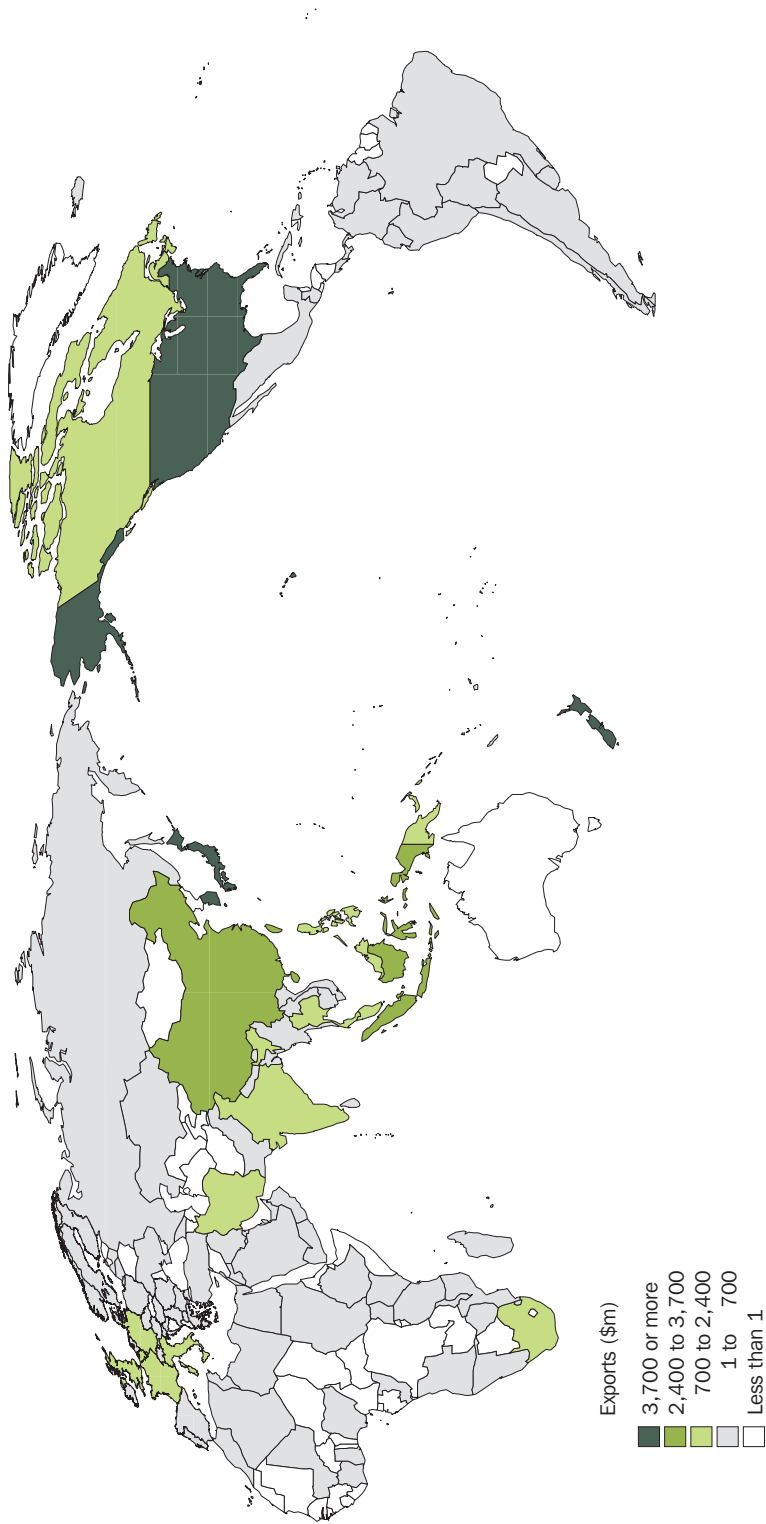
30.24 MERCHANDISE EXPORTS AND IMPORTS, By Country — *continued*

|                               | 1994-95       |               | 1995-96       |               | 1996-97       |               |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                               | Exports       | Imports       | Exports       | Imports       | Exports       | Imports       |
|                               | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           |
| Other Countries — (continued) |               |               |               |               |               |               |
| Pakistan                      | 191           | 141           | 259           | 132           | 304           | 144           |
| Palau                         | 1             | —             | 1             | —             | 6             | —             |
| Panama                        | 1             | 1             | 2             | 2             | 2             | 1             |
| Peru                          | 24            | 26            | 25            | 28            | 36            | 19            |
| Poland                        | 24            | 27            | 39            | 31            | 72            | 29            |
| Puerto Rico                   | 6             | 198           | 7             | 259           | 7             | 274           |
| Qatar                         | 58            | 184           | 46            | 184           | 51            | 105           |
| Reunion                       | 5             | —             | 5             | 0             | 6             | 0             |
| Romania                       | 81            | 15            | 70            | 10            | 122           | 10            |
| Russian Federation            | 200           | 28            | 86            | 26            | 101           | 24            |
| Samoa (American)              | 18            | 2             | 28            | 3             | 37            | 4             |
| Saudi Arabia                  | 277           | 750           | 452           | 874           | 447           | 859           |
| Seychelles                    | 2             | 0             | 5             | 0             | 3             | 0             |
| Slovak Republic               | 3             | 2             | 3             | 2             | 3             | 3             |
| Slovenia                      | 19            | 30            | 14            | 29            | 9             | 25            |
| Solomon Islands               | 65            | 3             | 92            | 4             | 82            | 4             |
| South Africa                  | 566           | 302           | 776           | 433           | 1 014         | 424           |
| Sri Lanka                     | 142           | 50            | 196           | 53            | 199           | 58            |
| St. Vincent & Grenadines      | 0             | 5             | 0             | 4             | 0             | 5             |
| Sudan                         | 5             | 0             | 3             | 0             | 28            | 0             |
| Swaziland                     | 0             | 1             | 1             | 1             | 2             | 0             |
| Switzerland                   | 286           | 991           | 519           | 966           | 238           | 894           |
| Syria                         | 6             | 0             | 5             | 0             | 4             | 1             |
| Tanzania                      | 4             | 2             | 17            | 4             | 28            | 6             |
| Tonga                         | 19            | 0             | 16            | 1             | 14            | 1             |
| Trinidad and Tobago           | 6             | 1             | 3             | 1             | 9             | 1             |
| Tunisia                       | 4             | 3             | 4             | 0             | 2             | 8             |
| Turkey                        | 228           | 58            | 366           | 73            | 384           | 74            |
| Tuvalu                        | 8             | —             | 4             | 0             | 2             | —             |
| Uganda                        | 2             | 3             | 2             | 7             | 3             | 6             |
| Ukraine                       | 9             | 1             | 7             | 1             | 8             | 2             |
| United Arab Emirates          | 338           | 627           | 542           | 475           | 665           | 801           |
| United States Virgin Islands  | 0             | 9             | 0             | 9             | 0             | 8             |
| Uruguay                       | 13            | 3             | 5             | 5             | 10            | 5             |
| Vanuatu                       | 45            | 4             | 41            | 2             | 43            | 1             |
| Venezuela                     | 10            | 2             | 13            | 3             | 5             | 1             |
| Viet Nam                      | 150           | 295           | 198           | 329           | 210           | 439           |
| Wallis & Futuna Islands       | 4             | —             | 5             | —             | 6             | —             |
| Western Samoa                 | 24            | 75            | 36            | 59            | 41            | 67            |
| Yemen                         | 14            | 0             | 78            | 0             | 91            | 0             |
| Zimbabwe                      | 7             | 30            | 31            | 15            | 33            | 17            |
| Zone of Co-op A — Timor Gap   | 33            | 0             | 33            | —             | 56            | 0             |
| Other Countries               | 103           | 25            | 94            | 96            | 209           | 128           |
| Destination or Origin Unknown | 0             | 31            | 1             | 46            | 1             | 47            |
| International Waters          | —             | 4             | —             | —             | —             | —             |
| No Country Details(a)         | 285           | —             | 290           | —             | 320           | —             |
| Ships' Stores                 | 574           | —             | 656           | —             | 612           | —             |
| Unidentified(b)               | —             | —             | —             | —             | 70            | —             |
| Total                         | 7 288         | 6 149         | 9 829         | 6 490         | 11 485        | 7 122         |
| <b>Total</b>                  | <b>67 052</b> | <b>74 619</b> | <b>76 004</b> | <b>77 792</b> | <b>78 885</b> | <b>78 977</b> |

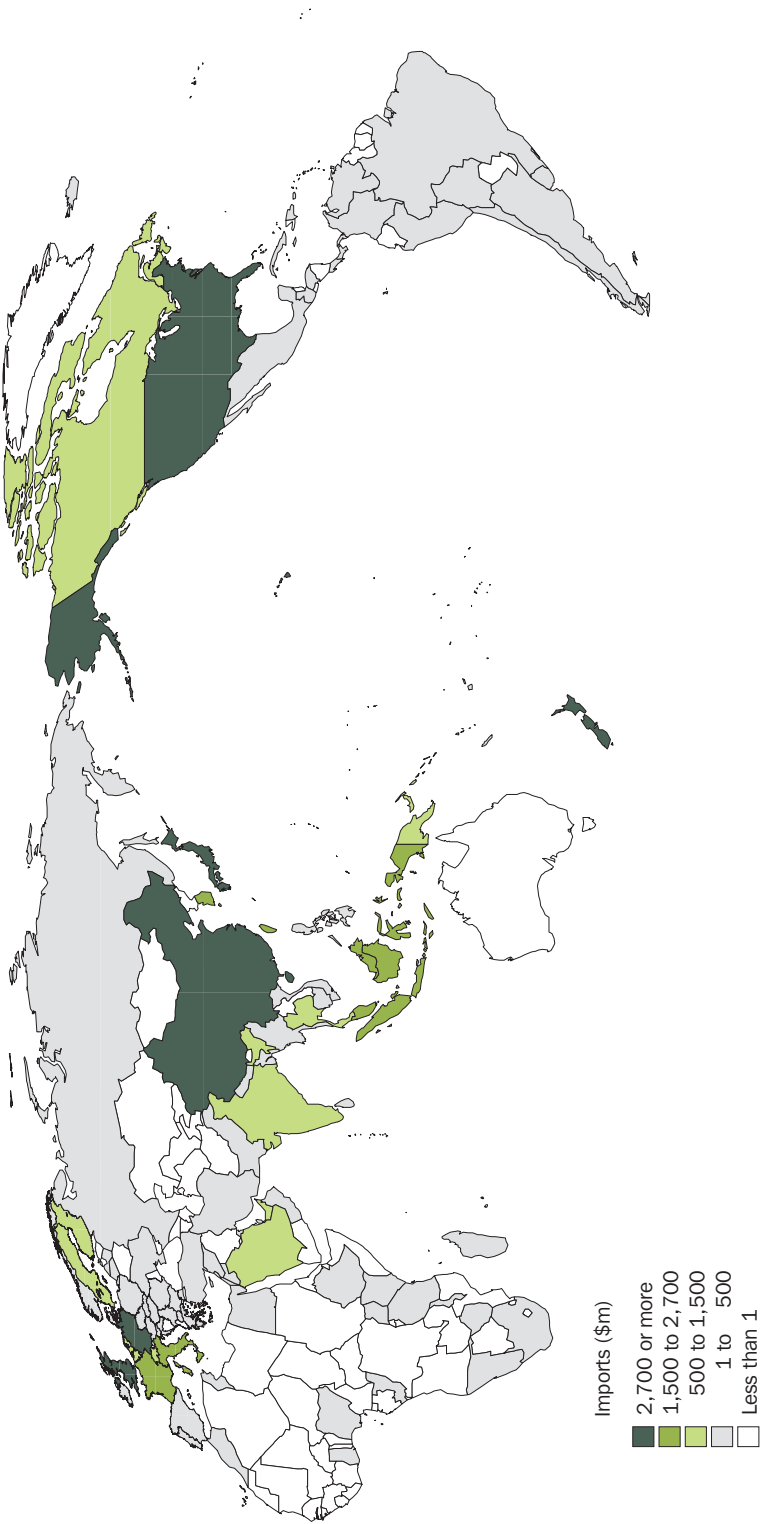
(a) Exports of alumina to Bahrain, Egypt and Iceland are excluded from country totals and included in the 'No country details' category. (b) Includes \$70m of exports for June 1997 which cannot yet be allocated by country.

Source: International Trade database, June 1997.

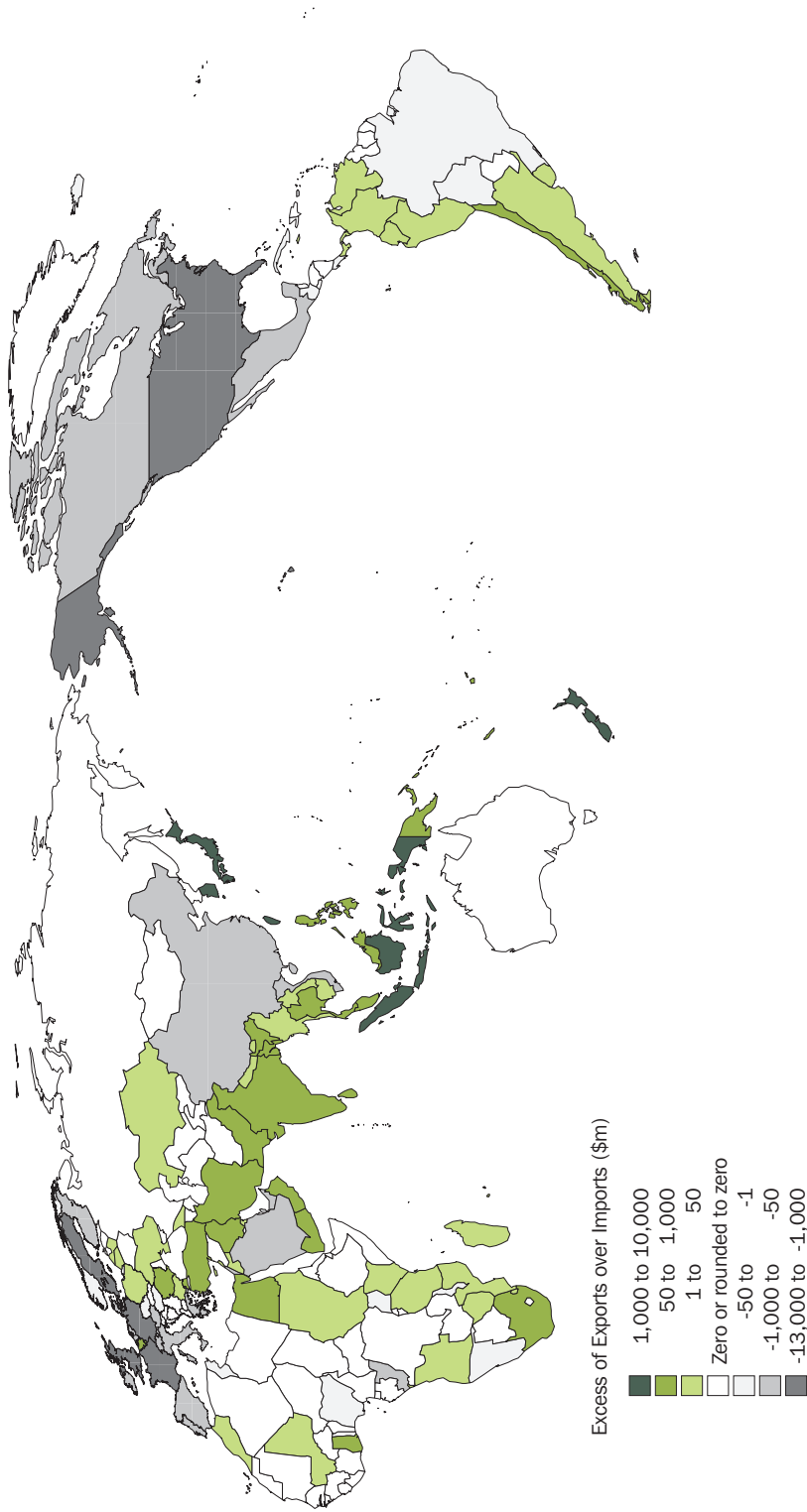
30.25 AUSTRALIA'S MERCHANDISE EXPORTS, Destinations — 1996-97



30.26 AUSTRALIA'S MERCHANDISE IMPORTS, Source Countries — 1996–97



30.27 AUSTRALIA'S NET BALANCE OF TRADE, Partner Countries — 1996-97





## Merchandise exports and imports by commodity

Commodity export and import statistics are presented according to the codes and descriptions of the third revision of the United Nations *Standard International Trade Classification, Revision 3* (SITC Rev. 3). This classification groups commodities according to the degree of processing they have undergone, from food and crude raw materials through to highly transformed manufactures.

Tables 30.28 and 30.29 show the values of major commodities exported and imported in 1996–97 and their percentage of the total value of Australian exports and imports.

Table 30.30 shows the value of all exports and imports, at broad commodity level, for 1994–95 to 1996–97.

For the year ended June 1997, exports were \$78,885m, up \$2,881m (4%) on the previous financial year. The most significant contributors to the rise were cereals and cereal preparations, up \$1,023m (21%) to \$5,952m; road vehicles, up \$629m (52%) to \$1,828m; petroleum, petroleum products and related materials, up \$617m (19%) to \$3,805m; and textile fibres and their wastes, up \$540m (13%) to \$4,605m. The export commodities recording the biggest falls were non-monetary gold, down \$828m (15%) to \$4,717m; non-ferrous metals, down \$610m (12%) to \$4,433; and meat and meat preparations, down \$344m (10%) to \$2,952m.

Australia's major commodity exports for 1996–97 and their principal markets were:

- coal, \$7,958m — 10% of total exports: Japan (46%), the Republic of Korea (12%), India (8%), and Taiwan (7%);
- non-monetary gold, \$4,717m — 6% of total exports: the Republic of Korea (53%),

Singapore (23%), Hong Kong (8%), and Japan (5%);

- wheat, \$4,300m — 5% of total exports: principal market information is confidential; and
- iron ore, \$3,157m — 4% of total exports: Japan (45%), China (21%), and the Republic of Korea (13%).

For the year ended June 1997, imports were \$78,977m, up \$1,185m (2%) on the previous year. The most significant rises were recorded for: petroleum, petroleum products and related materials, up \$813m (19%) to \$5,047m; and road vehicles, up \$599m (8%) to \$8,579m. Partly offsetting these rises were falls in imports of electrical machinery, down \$402m (8%) to \$4,914m; paper and paperboard, down \$172m (9%) to \$1,770m; and inorganic chemicals, down \$132m (16%) to \$700m.

Australia's major commodity imports for 1996–97 and their principal sources were:

- passenger motor vehicles, \$4,651m — 6% of total imports: Japan (45%), the Republic of Korea (17%), Germany (13%) and the United Kingdom (7%);
- petroleum oils and oils obtained from bituminous materials crude, \$3,786m — 5% of total imports: Indonesia (22%), United Arab Emirates (19%) and Papua New Guinea (19%);
- computer equipment, \$3,718m — 5% of total imports: the United States (26%), Singapore (22%), Japan (15%), and Taiwan (9%);
- telecommunication equipment, parts and accessories (excluding television and radio receivers) \$2,431m — 3% of total imports: the United States (19%), the United Kingdom (14%), Sweden (13%) and Japan (12%); and
- organic chemicals, \$2,040m — 3% of total imports: the United States of America (21%), the United Kingdom (12%) and Ireland (7%).

## 30.28 MERCHANDISE EXPORTS OF MAJOR COMMODITIES, 1996-97

| Published major commodities                                                                                              | \$m           | %            |
|--------------------------------------------------------------------------------------------------------------------------|---------------|--------------|
| Aircraft and associated equipment; spacecraft<br>including satellites) and spacecraft launch vehicles; and parts thereof | 624           | 0.8          |
| Alumina (aluminium oxide)                                                                                                | 2 540         | 3.2          |
| Aluminium                                                                                                                | 2 414         | 3.1          |
| Barley, unmilled                                                                                                         | 815           | 1.0          |
| Cars and other road vehicles (incl. air-cushion vehicles)                                                                | 1 828         | 2.3          |
| Cheese and curd                                                                                                          | 476           | 0.6          |
| Coal, whether or not pulverised but not agglomerated                                                                     | 7 958         | 10.1         |
| Copper ores and concentrates                                                                                             | 656           | 0.8          |
| Copper and copper alloys, unwrought (excl. master alloys)                                                                | 354           | 0.4          |
| Cotton (other than linters), not carded or combed                                                                        | 1 074         | 1.4          |
| Crustaceans, molluscs and aquatic invertebrates (except canned or bottled)                                               | 797           | 1.0          |
| Fruit and nuts, fresh, dried or preserved and<br>fruit preparations (incl. fruit and vegetable juices)(a)                | 637           | 0.8          |
| Gas, natural and manufactured                                                                                            | 1 895         | 2.4          |
| Gold, non-monetary (excl. gold ores and concentrates)                                                                    | 4 717         | 6.0          |
| Hides and skins, bovine and equine, raw                                                                                  | 201           | 0.3          |
| Iron and steel                                                                                                           | 1 618         | 2.1          |
| Iron ore concentrates and agglomerates (excl. roasted iron pyrites)                                                      | 3 157         | 4.0          |
| Lead and lead alloys, unwrought                                                                                          | 366           | 0.5          |
| Machinery specialised for particular industries                                                                          | 1 155         | 1.5          |
| Meat of bovine animals fresh, chilled or frozen                                                                          | 2 109         | 2.7          |
| Meat of sheep and goats fresh, chilled or frozen                                                                         | 556           | 0.7          |
| Milk and cream and milk products other than butter or cheese                                                             | 1 058         | 1.3          |
| Nickel and nickel alloys, unwrought                                                                                      | 439           | 0.6          |
| Nickel oxide sinters                                                                                                     | 234           | 0.3          |
| Office machines and automatic data processing machines                                                                   | 1 616         | 2.0          |
| Ores and concentrates of molybdenum, niobium, titanium etc.(a)                                                           | 503           | 0.6          |
| Petroleum oils and oils obtained from bituminous minerals, crude                                                         | 1 883         | 2.4          |
| Petroleum products                                                                                                       | 1 922         | 2.4          |
| Photographic and cinematographic supplies                                                                                | 398           | 0.5          |
| Plastics in primary and non-primary forms(a)                                                                             | 450           | 0.6          |
| Power generating machinery and equipment                                                                                 | 917           | 1.2          |
| Rice(a)                                                                                                                  | 313           | 0.4          |
| Sheep and goats, live                                                                                                    | 196           | 0.2          |
| Skins, sheep and lamb, with wool on, raw                                                                                 | 256           | 0.3          |
| Sorghum, unmilled                                                                                                        | 71            | 0.1          |
| Sugar, beet or cane, raw, in solid form                                                                                  | 1 459         | 1.8          |
| Uranium and thorium ores and concentrates                                                                                | 245           | 0.3          |
| Wheat (incl. spelt) and meslin, unmilled                                                                                 | 4 300         | 5.5          |
| Wood, in chips or particles                                                                                              | 516           | 0.7          |
| Wool, greasy (incl. fleece washed wool)                                                                                  | 2 181         | 2.8          |
| Wool, other, not carded or combed                                                                                        | 749           | 0.9          |
| Zinc and zinc alloys, unwrought                                                                                          | 353           | 0.4          |
| Zinc ores and concentrates                                                                                               | 489           | 0.6          |
| Total major commodities(a)                                                                                               | 56 495        | 71.6         |
| <b>Total exports</b>                                                                                                     | <b>78 885</b> | <b>100.0</b> |

(a) Excludes commodities subject to a 'no commodity details' restriction.

Source: International Trade database, June 1997.

## 30.29 MERCHANDISE IMPORTS OF MAJOR COMMODITIES, 1996–97

| Published major commodities                                                                                               | \$m           | %            |
|---------------------------------------------------------------------------------------------------------------------------|---------------|--------------|
| Aircraft and associated equipment; spacecraft<br>(including satellites) and spacecraft launch vehicles; and parts thereof | 1 828         | 2.3          |
| Articles of apparel and clothing accessories                                                                              | 1 842         | 2.3          |
| Automatic data processing machines and units thereof                                                                      | 3 718         | 4.7          |
| Baby carriages, toys, games and sporting goods                                                                            | 944           | 1.2          |
| Chemical materials and products, n.e.s.                                                                                   | 969           | 1.2          |
| Civil engineering and contractors' plant and equipment                                                                    | 1 097         | 1.4          |
| Clay and refractory construction materials and mineral manufactures, n.e.s.                                               | 456           | 0.6          |
| Electrical apparatus for switching or protecting electrical circuits                                                      | 821           | 1.0          |
| Electrical machinery and apparatus, n.e.s.                                                                                | 1 367         | 1.7          |
| Fish, crustaceans, molluscs and aquatic invertebrates, and preparations thereof                                           | 604           | 0.8          |
| Glass, glassware and pottery                                                                                              | 470           | 0.6          |
| Household-type electrical and non-electrical equipment, n.e.s.                                                            | 726           | 0.9          |
| Inorganic chemicals(a)                                                                                                    | 700           | 0.9          |
| Internal combustion piston engines, and parts thereof, n.e.s.                                                             | 998           | 1.3          |
| Iron and steel                                                                                                            | 1 296         | 1.6          |
| Machinery and equipment specialised for particular industries and parts thereof                                           | 1 197         | 1.5          |
| Manufactures of base metals, n.e.s.                                                                                       | 759           | 1.0          |
| Measuring, checking, analysing and controlling instruments and apparatus, n.e.s.                                          | 1 306         | 1.7          |
| Medical and pharmaceutical products                                                                                       | 1 996         | 2.5          |
| Motor vehicles for the transport of goods                                                                                 | 1 635         | 2.1          |
| Organic chemicals(a)                                                                                                      | 2 040         | 2.6          |
| Paper, paperboard and articles of paper pulp, of paper or of paperboard(a)                                                | 1 770         | 2.2          |
| Parts and accessories of motor vehicles and tractors, track-laying and wheeled                                            | 1 622         | 2.1          |
| Parts and accessories for office and automatic data processing machines                                                   | 1 942         | 2.5          |
| Passenger motor vehicles (other than public<br>transport type vehicles) incl. station wagons and racing cars              | 4 651         | 5.9          |
| Petroleum oils and oils obtained from bituminous minerals, crude                                                          | 3 786         | 4.8          |
| Petroleum oils and oils obtained from bituminous minerals (other than crude)                                              | 1 057         | 1.3          |
| Photographic and cinematographic supplies                                                                                 | 579           | 0.7          |
| Plastics in primary and non-primary forms(a)                                                                              | 1 575         | 2.0          |
| Printed matter                                                                                                            | 856           | 1.1          |
| Pumps, centrifuges, filtering or purifying apparatus and parts thereof                                                    | 851           | 1.1          |
| Rubber tyres, interchangeable tyre treads, tyre flaps and inner tubes for wheels of all kinds                             | 716           | 0.9          |
| Ships, boats (including hovercraft) and floating structures                                                               | 552           | 0.7          |
| Telecommunication equipment, n.e.s. and parts, n.e.s. and accessories                                                     | 2 431         | 3.1          |
| Television and radio broadcast receivers                                                                                  | 864           | 1.1          |
| Textile yarn                                                                                                              | 493           | 0.6          |
| Tractors, track-laying and wheeled                                                                                        | 488           | 0.6          |
| Woven cotton fabrics or man-made textile material (excluding narrow or special fabrics)                                   | 679           | 0.9          |
| Total major commodities(a)                                                                                                | 51 680        | 65.4         |
| <b>Total imports</b>                                                                                                      | <b>78 977</b> | <b>100.0</b> |

(a) Excludes commodities subject to a 'no commodity details' restriction.

Source: *International Trade database, June 1997.*

## 30.30 MERCHANDISE EXPORTS AND IMPORTS, By Commodity

| Standard International Trade Classification                                                                   | 1994-95 |         | 1995-96 |         | 1996-97 |         |
|---------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|
|                                                                                                               | Exports | Imports | Exports | Imports | Exports | Imports |
|                                                                                                               | \$m     | \$m     | \$m     | \$m     | \$m     | \$m     |
| <b>Food and live animals</b>                                                                                  |         |         |         |         |         |         |
| Live animals other than fish, crustaceans, molluscs and aquatic invertebrates                                 | 452     | 101     | 660     | 94      | 704     | 103     |
| Meat and meat preparations                                                                                    | 3 661   | 47      | 3 296   | 46      | 2 952   | 67      |
| Dairy products and birds' eggs                                                                                | 1 413   | 173     | 1 673   | 193     | 1 759   | 195     |
| Fish (not marine mammals), crustaceans, molluscs and aquatic invertebrates, and preparations thereof          | 1 144   | 609     | 1 114   | 601     | 1 087   | 604     |
| Cereals and cereal preparations(a)                                                                            | 2 522   | 207     | 4 929   | 166     | 5 952   | 178     |
| Vegetables and fruit(a)                                                                                       | 873     | 534     | 1 008   | 590     | 1 142   | 588     |
| Sugars, sugar preparations and honey                                                                          | 1 729   | 86      | 1 710   | 86      | 1 695   | 85      |
| Coffee, tea, cocoa, spices, and manufactures thereof                                                          | 174     | 505     | 193     | 504     | 190     | 502     |
| Feeding stuff for animals (excl. unmilled cereals)(a)                                                         | 387     | 109     | 458     | 94      | 530     | 122     |
| Miscellaneous edible products and preparations                                                                | 209     | 451     | 231     | 520     | 282     | 543     |
| Total(a)                                                                                                      | 12 564  | 2 822   | 15 272  | 2 894   | 16 293  | 2 987   |
| <b>Beverages and tobacco</b>                                                                                  |         |         |         |         |         |         |
| Beverages                                                                                                     | 508     | 336     | 605     | 339     | 712     | 351     |
| Tobacco and tobacco manufactures                                                                              | 44      | 186     | 43      | 165     | 67      | 152     |
| Total                                                                                                         | 552     | 522     | 648     | 504     | 779     | 503     |
| <b>Crude materials, inedible, except fuels</b>                                                                |         |         |         |         |         |         |
| Hides, skins and furskins, raw                                                                                | 487     | 4       | 504     | 2       | 504     | 2       |
| Oil seeds and oleaginous fruits                                                                               | 110     | 133     | 206     | 98      | 201     | 95      |
| Crude rubber (incl. synthetic and reclaimed)                                                                  | 12      | 153     | 11      | 155     | 10      | 136     |
| Cork and wood                                                                                                 | 627     | 613     | 624     | 421     | 616     | 430     |
| Pulp and waste paper                                                                                          | 44      | 160     | 27      | 191     | 13      | 136     |
| Textile fibres and their wastes (not manufactured into yarn or fabric)                                        | 4 595   | 188     | 4 065   | 175     | 4 605   | 151     |
| Crude fertilisers and crude minerals (excl. coal, petroleum and precious stones)(a)(b)                        | 367     | 171     | 426     | 150     | 377     | 140     |
| Metalliferous ores and metal scrap(a)(c)                                                                      | 7 604   | 179     | 8 666   | 178     | 9 025   | 174     |
| Crude animal and vegetable materials, n.e.s.                                                                  | 226     | 193     | 223     | 206     | 219     | 223     |
| Total(a)(b)                                                                                                   | 14 072  | 1 794   | 14 752  | 1 576   | 15 570  | 1 487   |
| <b>Mineral fuels, lubricants and related materials</b>                                                        |         |         |         |         |         |         |
| Coal, coke and briquettes                                                                                     | 6 938   | 22      | 7 840   | 18      | 8 006   | 11      |
| Petroleum, petroleum products and related materials(b)                                                        | 2 949   | 3 608   | 3 188   | 4 234   | 3 805   | 5 047   |
| Gas, natural and manufactured                                                                                 | 1 355   | 38      | 1 562   | 59      | 1 895   | 97      |
| Total(b)                                                                                                      | 11 242  | 3 668   | 12 590  | 4 311   | 13 706  | 5 155   |
| <b>Animal and vegetable oils, fats and waxes</b>                                                              |         |         |         |         |         |         |
| Animal oils and fats(a)                                                                                       | 220     | 3       | 197     | 5       | 184     | 8       |
| Fixed vegetable fats and oils, crude, refined or fractionated                                                 | 4       | 208     | 11      | 241     | 10      | 235     |
| Fats and oils (processed), waxes and inedible mixtures or preparations, of animal or vegetable origin, n.e.s. | 38      | 20      | 29      | 23      | 38      | 23      |
| Total(a)                                                                                                      | 262     | 231     | 237     | 269     | 232     | 266     |
| <b>Chemical and related products, n.e.s.</b>                                                                  |         |         |         |         |         |         |
| Organic chemicals                                                                                             | 84      | 1 795   | 87      | 1 919   | 116     | 2 040   |
| Inorganic chemicals(a)(b)                                                                                     | 309     | 639     | 365     | 832     | 317     | 700     |
| Dyeing, tanning and colouring materials                                                                       | 402     | 372     | 435     | 385     | 407     | 408     |
| Medicinal and pharmaceutical products(a)                                                                      | 771     | 1 562   | 894     | 1 830   | 978     | 1 996   |
| Essential oils and resinoids and perfume materials; toilet, polishing and cleansing preparations              | 258     | 568     | 300     | 609     | 295     | 636     |
| Fertilisers (excl. crude)(a)                                                                                  | 24      | 535     | 26      | 669     | 24      | 706     |
| Plastics in primary forms(a)(b)                                                                               | 283     | 923     | 326     | 925     | 296     | 854     |
| Plastics in non-primary forms                                                                                 | 143     | 719     | 159     | 757     | 154     | 720     |
| Chemical materials and products, n.e.s.                                                                       | 405     | 896     | 423     | 975     | 452     | 969     |
| Total(a)(b)                                                                                                   | 2 679   | 8 009   | 3 015   | 8 901   | 3 039   | 9 029   |

For footnotes see end of table.

...continued

30.30 MERCHANDISE EXPORTS AND IMPORTS, By Commodity — *continued*

| Standard International Trade Classification                                                                                | 1994-95       |               | 1995-96       |               | 1996-97       |               |
|----------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                                                                                                            | Exports       | Imports       | Exports       | Imports       | Exports       | Imports       |
|                                                                                                                            | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           |
| <b>Manufactured goods classified chiefly by material</b>                                                                   |               |               |               |               |               |               |
| Leather, leather manufactures, and dressed furskins, n.e.s.                                                                | 515           | 167           | 463           | 164           | 469           | 162           |
| Rubber manufactures, n.e.s.(b)                                                                                             | 146           | 1 045         | 157           | 1 125         | 149           | 1 115         |
| Cork and wood manufactures (excl. furniture)(a)                                                                            | 98            | 329           | 104           | 317           | 102           | 333           |
| Paper, paperboard, and articles of paper pulp, of paper or of paperboard(a)(b)                                             | 267           | 1 859         | 296           | 1 942         | 392           | 1 770         |
| Textile yarn, fabrics, made-up articles, n.e.s., and related products                                                      | 465           | 2 454         | 553           | 2 359         | 577           | 2 284         |
| Non-metallic mineral manufactures, n.e.s.(a)                                                                               | 739           | 1 213         | 746           | 1 188         | 714           | 1 245         |
| Iron and steel                                                                                                             | 1 580         | 1 287         | 1 757         | 1 410         | 1 618         | 1 296         |
| Non-ferrous metals(b)                                                                                                      | 4 518         | 679           | 5 043         | 645           | 4 433         | 613           |
| Manufactures of metals, n.e.s.(b)                                                                                          | 694           | 1 876         | 725           | 1 890         | 804           | 1 908         |
| Total(a)(b)                                                                                                                | 9 022         | 10 909        | 9 844         | 11 040        | 9 258         | 10 726        |
| <b>Machinery and transport equipment</b>                                                                                   |               |               |               |               |               |               |
| Power generating machinery and equipment                                                                                   | 732           | 1 769         | 826           | 1 998         | 917           | 1 896         |
| Machinery specialised for particular industries                                                                            | 924           | 3 792         | 1 078         | 3 924         | 1 155         | 4 044         |
| Metal working machinery                                                                                                    | 140           | 573           | 163           | 492           | 205           | 609           |
| General industrial machinery and equipment, n.e.s. and machine parts, n.e.s.                                               | 943           | 4 299         | 1 143         | 4 470         | 1 189         | 4 649         |
| Office machines and automatic data processing machines                                                                     | 1 589         | 5 728         | 1 903         | 6 033         | 1 616         | 5 983         |
| Telecommunications and sound recording and reproducing apparatus and equipment                                             | 541           | 3 362         | 719           | 3 759         | 628           | 3 669         |
| Electrical machinery, apparatus, appliances, parts (incl. non-electrical counterparts of electrical domestic equipment)(b) | 1 222         | 4 909         | 1 394         | 5 316         | 1 292         | 4 914         |
| Road vehicles (incl. air-cushion vehicles)                                                                                 | 1 081         | 8 678         | 1 199         | 7 980         | 1 828         | 8 579         |
| Transport equipment (excl. road vehicles)                                                                                  | 965           | 2 050         | 1 295         | 2 487         | 1 805         | 2 441         |
| Total(b)                                                                                                                   | 8 137         | 35 160        | 9 720         | 36 459        | 10 635        | 36 784        |
| <b>Miscellaneous Manufactured Articles</b>                                                                                 |               |               |               |               |               |               |
| Prefabricated buildings; sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s.(b)                         | 52            | 218           | 76            | 221           | 84            | 234           |
| Furniture, parts thereof; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings                 | 77            | 444           | 97            | 464           | 96            | 532           |
| Travel goods, handbags and similar containers                                                                              | 15            | 338           | 14            | 362           | 15            | 339           |
| Articles of apparel and clothing accessories                                                                               | 304           | 1 637         | 320           | 1 766         | 353           | 1 842         |
| Footwear                                                                                                                   | 58            | 570           | 66            | 574           | 65            | 623           |
| Professional, scientific and controlling instruments and apparatus, n.e.s.                                                 | 442           | 1 834         | 543           | 1 911         | 629           | 1 944         |
| Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks(b)                            | 511           | 1 206         | 562           | 1 258         | 578           | 1 252         |
| Miscellaneous manufactured articles, n.e.s.                                                                                | 857           | 4 462         | 1 039         | 4 479         | 1 013         | 4 588         |
| Total(b)                                                                                                                   | 2 316         | 10 709        | 2 717         | 11 035        | 2 833         | 11 354        |
| <b>Commodities and transactions not classified elsewhere in the SITC</b>                                                   |               |               |               |               |               |               |
| Special transactions and commodities not classified according to kind                                                      | 413           | 25            | 459           | 28            | 513           | 32            |
| Gold coin whether or not legal tender, and other coin being legal tender                                                   | 206           | 2             | 145           | 5             | 116           | 9             |
| Coin (excl. gold coin), not being legal tender                                                                             | 1             | 0             | 0             | 0             | 1             | 1             |
| Gold, non-monetary (excl. gold ores and concentrates)                                                                      | 4 699         | 710           | 5 545         | 708           | 4 717         | 561           |
| Combined confidential items of trade(c)                                                                                    | 886           | 59            | 1 058         | 62            | 1 194         | 80            |
| Total(d)                                                                                                                   | 6 205         | 796           | 7 207         | 803           | 6 541         | 683           |
| <b>Total merchandise exports and imports</b>                                                                               | <b>67 052</b> | <b>74 619</b> | <b>76 004</b> | <b>77 792</b> | <b>78 885</b> | <b>78 977</b> |

(a) Excludes export commodities subject to a 'No commodities details' restriction. (b) Excludes imports commodities subject to a 'No commodity details' restriction. (c) Includes export commodities subject to a 'Broad commodity details' restriction. (d) Includes exports and imports commodities subject to a 'No commodity details' restriction.

Source: *International Trade database, June 1997.*

## Merchandise exports and imports by industry of origin

The following table classifies merchandise trade statistics according to divisions and selected subdivisions of the Australian and New Zealand

Standard Industrial Classification (ANZSIC). The statistics are compiled by allocating international trade data for a commodity to an ANZSIC industry of origin category based upon the industry with which that commodity is primarily associated.

### 30.31 MERCHANDISE EXPORTS AND IMPORTS, By Industry of Origin

|                                                                | 1994-95       |               | 1995-96       |               | 1996-97       |               |
|----------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                                                | Exports       | Imports       | Exports       | Imports       | Exports       | Imports       |
| ANZSIC                                                         | \$m           | \$m           | \$m           | \$m           | \$m           | \$m           |
| Agriculture, forestry and fishing                              |               |               |               |               |               |               |
| Agriculture                                                    | 5 662         | 779           | 7 690         | 717           | 8 975         | 649           |
| Services to agriculture; hunting and trapping                  | 726           | 9             | 821           | 9             | 1 150         | 10            |
| Forestry and logging                                           | 35            | 6             | 45            | 6             | 61            | 6             |
| Commercial fishing                                             | 537           | 54            | 579           | 65            | 577           | 75            |
| Total                                                          | 6 960         | 848           | 9 135         | 797           | 10 763        | 740           |
| Mining                                                         |               |               |               |               |               |               |
| Coal mining                                                    | 6 895         | 11            | 7 783         | 12            | 7 965         | 10            |
| Oil and gas extraction                                         | 2 999         | 2 506         | 3 155         | 2 907         | 3 778         | 3 881         |
| Metal ore mining                                               | 4 792         | 130           | 5 334         | 129           | 5 939         | 132           |
| Other mining                                                   | 236           | 157           | 251           | 150           | 213           | 137           |
| Total                                                          | 14 922        | 2 804         | 16 523        | 3 198         | 17 895        | 4 160         |
| Manufacturing                                                  |               |               |               |               |               |               |
| Food, beverage and tobacco manufacturing                       | 10 756        | 3 121         | 10 971        | 3 263         | 11 011        | 3 396         |
| Textile, clothing, footwear and leather manufacturing          | 2 698         | 5 246         | 2 723         | 5 280         | 2 816         | 5 289         |
| Wood and paper product manufacturing                           | 986           | 2 784         | 989           | 2 696         | 1 044         | 2 495         |
| Printing, publishing and recorded media                        | 364           | 1 699         | 415           | 1 627         | 409           | 1 597         |
| Petroleum, coal, chemical and associated product manufacturing | 4 422         | 11 255        | 5 102         | 12 507        | 5 367         | 12 516        |
| Non-metallic mineral product manufacturing                     | 308           | 1 053         | 392           | 1 011         | 377           | 1 020         |
| Metal product manufacturing                                    | 14 338        | 5 094         | 16 442        | 5 072         | 14 697        | 4 886         |
| Machinery and equipment manufacturing                          | 9 220         | 38 612        | 10 967        | 40 144        | 12 006        | 40 423        |
| Other manufacturing                                            | 704           | 1 869         | 741           | 1 945         | 707           | 2 153         |
| Total                                                          | 43 796        | 70 733        | 48 742        | 73 545        | 48 434        | 73 775        |
| Other industries(a)(b)                                         | 1 375         | 233           | 1 607         | 252           | 1 790         | 301           |
| <b>Total</b>                                                   | <b>67 052</b> | <b>74 619</b> | <b>76 004</b> | <b>77 792</b> | <b>78 885</b> | <b>78 977</b> |

(a) Includes commodities subject to a 'No commodity details' restriction. (b) Includes \$10m of exports for May 1997 and \$60m for June 1997 which cannot yet be allocated.

Source: International Trade database, June 1997.

## Import Price Index

The Import Price Index measures changes in prices of imports of merchandise into Australia on a free-on-board, country of origin basis.

Prices of individual shipments are obtained from major importers of the selected items.

Index items have been grouped according to four different classifications:

- the *Standard International Trade Classification Revision 3* (SITC Rev. 3);
- an industry of origin basis defined in terms of ANZSIC;
- the United Nations *Classification by Broad Economic Categories* (BEC); and
- the *Combined Australian Customs Tariff and Statistical Nomenclature*.

Tables 30.32 to 30.34 show index numbers in respect of the first three of these classifications.

**30.32 IMPORT PRICE INDEX, Index Numbers Based on the SITC(a)**

| SITC section                                          | 1992–93      | 1993–94      | 1994–95      | 1995–96      | 1996–97      |
|-------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Food and live animals chiefly for food                | 104.7        | 106.8        | 116.6        | 115.9        | 112.8        |
| Beverages and tobacco                                 | 121.8        | 111.5        | 106.6        | 109.8        | 114.3        |
| Crude materials, inedible, except fuels               | 101.1        | 116.3        | 121.9        | 125.8        | 110.2        |
| Mineral fuels, lubricants and other related materials | 100.1        | 93.5         | 90.1         | 89.8         | 98.1         |
| Animal and vegetable oils, fats and waxes             | 126.6        | 120.9        | 140.4        | 170.1        | 158.7        |
| Chemicals and related products n.e.s.                 | 106.2        | 103.3        | 108.8        | 115.1        | 107.5        |
| Manufactured goods classified chiefly by material     | 109.3        | 112.1        | 110.4        | 115.7        | 109.6        |
| Machinery and transport equipment                     | 116.8        | 123.1        | 121.1        | 117.4        | 108.5        |
| Miscellaneous manufactured articles                   | 114.9        | 117.0        | 113.4        | 114.2        | 111.2        |
| Commodities and transactions n.e.c.                   | 98.7         | 110.4        | 104.4        | 103.7        | 93.6         |
| <b>All groups</b>                                     | <b>112.1</b> | <b>115.6</b> | <b>114.8</b> | <b>115.0</b> | <b>108.5</b> |

(a) Reference base year 1989–90 = 100.0.

Source: *Import Price Index, Australia* (6414.0).

**30.33 IMPORT PRICE INDEX, Industry of Origin Index Numbers Based on ANZSIC(a)**

| ANZSIC Division                   | 1991–92 | 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|-----------------------------------|---------|---------|---------|---------|---------|---------|
| Agriculture, forestry and fishing | 99.7    | 102.6   | 107.3   | 141.7   | 136.3   | 128.0   |
| Mining                            | 105.5   | 113.7   | 97.8    | 102.5   | 104.5   | 115.5   |
| Manufacturing                     | 102.6   | 111.7   | 115.5   | 113.8   | 113.5   | 106.8   |

(a) Reference base year 1989–90 = 100.0.

Source: *Import Price Index, Australia* (6414.0).

**30.34 IMPORT PRICE INDEX, Index Numbers for BEC and End Use Classes(a)**

| Categories/classes                                    | 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|-------------------------------------------------------|---------|---------|---------|---------|---------|
| <b>Broad Economic Categories</b>                      |         |         |         |         |         |
| Food and beverages                                    | 108.0   | 107.8   | 119.5   | 119.8   | 116.0   |
| Industrial supplies n.e.s.                            | 104.1   | 105.0   | 106.6   | 113.4   | 105.8   |
| Fuels and lubricants                                  | 103.2   | 95.4    | 93.0    | 90.7    | 99.0    |
| Capital goods and parts and accessories thereof       | 110.9   | 114.0   | 110.0   | 104.0   | 95.0    |
| Transport equipment and parts and accessories thereof | 124.6   | 135.9   | 136.8   | 135.1   | 126.9   |
| Consumer goods n.e.s.                                 | 114.6   | 117.7   | 114.0   | 114.1   | 110.1   |
| <b>End Use Classes</b>                                |         |         |         |         |         |
| Capital goods                                         | 117.0   | 122.8   | 119.8   | 116.0   | 107.7   |
| Intermediate goods                                    | 105.1   | 106.6   | 107.6   | 109.2   | 102.5   |
| Consumption goods                                     | 116.9   | 121.1   | 119.2   | 119.6   | 115.2   |

(a) Reference base year 1989–90 = 100.0.

Source: *Import Price Index, Australia* (6414.0).

## Export Price Index

The Export Price Index measures changes in the prices of exports of merchandise from Australia, including re-exports (i.e. goods which are imported into Australia and exported at a later date without physical alteration).

The current Export Price Index is a fixed weights index compiled on a reference base of 1989–90 = 100.0, with the weights based predominantly on Australian exports for 1988–89.

In general, prices are obtained from major exporters of the selected commodities included in the index.

The commodities included in the current index have been combined into broad index groups in three ways:

- in terms of the Australian *Harmonised Export Commodity Classification* (AHECC);
- on an industry of origin basis defined in terms of ANZSIC; and
- for selected sections of the *Standard International Trade Classification, Revision 3* (SITC Rev. 3).

Tables 30.35 and 30.36 show index numbers in respect of the first two of these classifications.

**30.35 EXPORT PRICE INDEX, Index Numbers Based on AHECC(a)**

| AHECC sections                            | 1991–92     | 1992–93     | 1993–94     | 1994–95     | 1995–96     | 1996–97     |
|-------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Live animals, animal products             | 97.6        | 105.1       | 110.3       | 105.9       | 98.8        | 92.7        |
| Vegetable products                        | 83.1        | 94.3        | 88.6        | 82.7        | 101.1       | 98.1        |
| Prepared foodstuffs                       | 87.9        | 94.9        | 102.3       | 104.6       | 101.3       | 99.8        |
| Mineral products                          | 103.1       | 108.2       | 100.9       | 95.1        | 100.9       | 103.0       |
| Products of chemical or allied industries | 89.6        | 90.1        | 87.5        | 84.4        | 89.5        | 86.9        |
| Wool and cotton fibres                    | 66.6        | 60.9        | 59.0        | 80.8        | 72.7        | 67.6        |
| Gold, diamonds and coin                   | 91.8        | 99.6        | 110.4       | 104.0       | 102.3       | 92.1        |
| Base metals and articles of base metals   | 79.7        | 81.0        | 76.3        | 96.8        | 97.0        | 86.1        |
| Machinery and mechanical appliances       | 94.8        | 98.2        | 97.5        | 97.2        | 95.8        | 88.5        |
| Motor vehicles, aircraft and vessels      | 100.4       | 105.0       | 109.3       | 108.2       | 107.3       | 103.6       |
| <b>All groups</b>                         | <b>89.6</b> | <b>93.5</b> | <b>91.8</b> | <b>94.7</b> | <b>96.1</b> | <b>92.4</b> |

(a) Reference base year 1989–90 = 100.0.

Source: *Export Price Index, Australia* (6405.0).

**30.36 EXPORT PRICE INDEX, Industry of Origin, Index Numbers Based on ANZSIC(a)**

| ANZSIC Division                | 1991–92 | 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|--------------------------------|---------|---------|---------|---------|---------|---------|
| Agriculture, forestry, fishing | 72.9    | 74.6    | 72.2    | 83.4    | 85.1    | 80.6    |
| Mining                         | 103.5   | 108.0   | 101.0   | 94.2    | 100.0   | 101.3   |
| Manufacturing                  | 89.8    | 94.1    | 95.2    | 98.6    | 98.0    | 92.5    |

(a) Reference base year 1989–90 = 100.0.

Source: *Export Price Index, Australia* (6405.0).



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